Iowa Room

STUDY TO

ESTABLISH AN EVALUATION SYSTEM FOR STATE OF IOWA MERIT EMPLOYMENT SYSTEM CLASSIFICATIONS ON THE BASIS OF COMPARABLE WORTH

FINAL REPORT

April, 1984

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April 3, 1984

Comparable Worth Steering
Committee
State Capitol Building
Des Moines, Iowa 50319

Dear Committee Members:

Arthur Young is pleased to submit this final report of our engagement to establish an evaluation system for State of Iowa Merit Employment System classifications on the basis of comparable worth. Included in the report are summaries of the project's objectives, methods, analyses, findings, and recommendations. All appendices referred to in this report have been provided under separate cover in a technical supplement.

This report is organized in the following sections:

I. Introduction - The introdution provides the background that led to the comparable worth project and an overview of the project objectives.

II. Technical Approach - The technical approach provides a description of each step in the project, including a summary of the analysis and results of key points in the process.

III. Evaluation System - This section provides a more detailed description of the system used to evaluate State of Iowa job classifications and of the process and rationale used in developing this system.

IV. Implementation Impact - This section provides several alternative approaches for implementing the system and the overall impact each approach would have in terms of classification grades changes for male-dominated and female-dominated jobs.

V. Evaluation System Administration - This section provides recommended procedures for ongoing maintenance of the evaluation system in accordance with the concept of comparable worth.

VI. Recommended Pay Grade Assignment Appeal Procedure - This section provides a recommended method for State of Iowa Merit Employment System employees to appeal the grade to which their classification was assigned.

We appreciated the opportunity to work with the State of Iowa. We received an excellent level of cooperation from personnel throughout the State government.

If we can be of further assistance in interpreting our report, please feel free to contact us at (414) 273-3340.

Very truly yours,

Arthur Young + Company

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I. INTRODUCTION

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In July of 1983, the State of Iowa requested proposals from consulting firms to provide assistance to establish a single system to evaluate Iowa Merit Employment System classifications on the basis of comparable worth. A process of competitive bidding by several consulting firms followed and Arthur Young was selected to perform this project. The need for this study was generated by the requirements that compensation of state merit employment jobs be based upon the concept of comparable worth and the perceived need for an independent study to update and improve compensation systems and job classifications. House File 313 establishes "the policy of this state that a state department, board, commission, or agency shall not discriminate in compensation for work of comparable worth between jobs held predominately by women and jobs held predominately by men." House File 313 also directed that a Steering Committee be established to oversee and direct the project. The Steering Committee members were: Co-Chairs Representative Minnette Doderer and Ms. Jane Hogan; Senator Charles H. Bruner; Senator Julia B. Gentleman; Representative Darrell Hanson; Ms. Susan Neely, Office of the Governor; and Ms. Pat O'Shea.

Background

When viewed in aggregate, women's wages have historically fallen far short of those received by men. This pattern of wage disparity has continued to the present time, despite enactment of Title VII of the Civil Rights Act, prohibiting employment discrimination; and the Equal Pay Act, mandating "equal pay for equal work" regardless of sex. Likewise, recent social changes have apparently had little effect on the prevailing differences between pay rates for the typical male and female worker.

A variety of hypotheses have been advanced to explain sex-based differentials in wages. Economic studies which have tested factors relating to productivity capacity (e.g., education, experience, absenteeism rates, etc.) including one conducted by the University of Michigan Survey Research Center ("Do Women Deserve to Earn Less than Men?") have indicated that only one-third of the male-female wage differential can be accounted for by sex differences in such factors. An alternative hypothesis suggests that the reason for sex-related pay differentials is the traditional sex-segregation of most jobs. Data regarding state employees suggests that job sex-segregation has, in fact, contributed to pay differentials. In August, 1982, Mr. Ta-Yu Yang, representing the Iowa Civil Rights Commission, reported the following findings on job segregation:

"1. One of every two female State employees occupies a position in office/clerical and paraprofessional job categories, the lowest-paying job categories.

2. Women represent 17.3% of the official/administrator category, 6.7% of the protective service worker category, and 12.9% of the skilled craft workers category.
3. Women represent 73.1% of the paraprofessional job category and 94.6% of the office/clerical job category.
4. A male State employee is four times more likely to become an official/administrator while a female State employee is 19 times more likely to be an office/clerical worker.
5. The lower the income bracket, the more concentrated are women State employees.
6. In 1981, 95.2% of the State employees making more than $33,000 were men. Seventy-nine point three percent of the State employees making less than $10,000 were women."

Further, traditional programs of salary administration, and particularly the job evaluation systems by which wage rates are determined, are seen as maintaining and contributing to pay discrimination. Briefly, many such systems are seen as being biased in favor of jobs held by males. These systems also contribute to the perpetuation of wage discrimination by basing an employer's wage structures on the existing labor market wage rates in the community, which presumably incorporate the results of any past discrimination. By using the labor market as a test of job evaluation system accuracy, organizations may be perpetuating discriminatory pay practices.

Recently, the principle of comparable worth has been proposed as a means by which inequitable pay rates could be remedied. The basic tenet of comparable worth is that jobs should be compensated according to the inherent "value" of the work performed. Specifically, this concept implies that all jobs can be ordered in terms of their comparative value to the attainment of an organization's objectives, and that this value ordering should be used as the primary basis by which equitable pay relationships among jobs are established.

Project Objectives

Our overall concept and intent in this project was to develop a compensation system for all State of Iowa Merit Employment System employees which is internally equitable and provides comparable pay for positions of comparable value. A major problem in implementing the comparable worth concept is establishing the appropriate mechanism for defining job value. Job evaluation is the term used for a variety of methods aimed at determining the relative value of jobs within an organization for purposes of pay administration. The various methods share the common assumption that jobs contribute in different ways to the success of an organization and should be paid

in proportion to their contribution. The result of job evaluation is an ordering of jobs on the basis of value. Further, job evaluation is a method for comparing job classifications rather than individual positions, and is, in theory, not affected by individual performance by job incumbents.

In the following sections of this report, we describe the technical approach employed to accomplish the objective stated above, the findings and conclusions drawn from our of job evaluations and policy issues which should be addressed regarding program administration and maintenance.

II. TECHNICAL APPROACH

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The technical approach used by Arthur Young consultants in conducting the comparable worth study was designed to attain the objectives discussed in the preceding section in an efficient and effective manner. The approach used was characterized by the following:

- A systematic, logical series of steps determined and agreed to at the beginning of the project.
- Contact and consultation with the Steering Committee, the Governor's Office, the Merit Employment Department and agency management at key points throughout the project.

The planned technical approach was organized into ten major tasks. Each of the ten major tasks is discussed below along with general findings and results associated with each task. Statistical analysis of the job evaluation results are summarized in Section III of this report.

Task 1 - Project Initiation and Orientation

To facilitate the progress of the study and to provide a continuing communication link, regular contact was made with the Steering Committee. Meetings were held to discuss the objectives and results expected from the project, to consider and approve approaches for various work steps, to review and test the proposed evaluation system, and to assist in communicating the project status.

Considerable effort was made to explain the purpose and limitations of the study to the people whose positions were to be studied. The first step in introducing the project to the employees was a letter sent by the Governor at the onset of the project to explain the purpose of the study. Orientation sessions with department heads and agency personnel representatives were also held. Subsequent contact included a progress report from Arthur Young to employees, as well as interviews and meetings with employees and department management staff at key points in the process.

To further our understanding of the State's job classification practices, we obtained and reviewed policy statements, procedures, job specifications; organizational charts, a listing of current job classifications by salary, grade, and number of male/female incumbents; and other relevant documentation.

Task 2 - Design and Implementation of Position Analysis

One of the most important ingredients to determining the appropriate worth of a job classification is a comprehensive understanding of the jobs to be evaluated. Job analysis is the starting point of the entire process. It must be done thoroughly and in a consistent manner. If the classification to be evaluated is not fully understood by the job analyst, and/or if the material defining or describing the classification is not accurate, there will likely be breakdowns in subsequent steps. The purpose of this task was to assure our full understanding of the approximately 810 state merit job classifications under study. Furthermore, our previous experiences indicated that evaluations of jobs held predominately by women may be inaccurate because job descriptions of such jobs may be incomplete, overly general, or contain language which negatively influences evaluation. Therefore, rather than just using existing merit system information, a major portion of the overall process involved verifying the accuracy of classification descriptions and classification specifications and standards, so as to accurately document job content. Our approach was tailored to provide clearly defined and verified data for position evaluation. We have found that providing detailed current accurate information in a consistent format greatly improves the reliability and quality of the evaluation process.

To accomplish this, a classification analysis questionnaire (see Appendix A) was distributed to a selected sample of approximately 4,500 Merit System employees representing the 810 job classifications. (Our sample of 4,572 represented over 25% of the total State Merit System Employee work force.) This sample included representatives from each job classification currently filled, including all employees in classifications where there were less than 5 incumbents. Our sampling criteria were established as follows:

Number of employees in classification	Number sampled
5 or less	All employees sampled
6 to 100	25%, but not less than 5
101 to 200	25% up to a maximum of 35
201 to 500	20% up to a maximum of 50
501 to 1,000	10% up to a maximum of 75
1,000+	5%, but not less than 75

Our objective in selecting specific employees to receive questionnaires was to obtain a broad cross-section of employees representative of the 810 job classifications, including employees from many different departments and locations throughout the State of Iowa. Therefore, we selected employees from within the same job classification based on the following criteria:

- Agency
- Building/Location
- County
- Sex
- Salary Step
- Time in Position

A consultant took a listing with this information for all merit system employees and selected those employees to be sampled on this basis.

The classification analysis questionnaire was used to assist the employees in describing their jobs. The questionnaire requested detailed information in a consistent format reducing the possibility of evaluating the job classification on outdated, inaccurate, incomplete or overly general information. The questionnaire was also specifically designed to identify those aspects of jobs traditionally held by women, which are often overlooked or not credited in determining worth. Instructions described procedures for completing the questionnaire and for dealing with aspects of jobs not covered in job specifications, such as special duties and responsibilities, experience requirements, purpose of the position, and working conditions.

To verify factual accuracy and to ensure completeness, all completed questionnaires were reviewed and commented on by the immediate supervisors.

All completed classification analysis questionnaires were reviewed by a member of the consulting team. Questionnaire responses were systematically compared with Iowa Merit Employment Department classification standards and specifications to verify job content. We identified individual employees we considered to be clearly misclassified and removed them from the sample. When a questionnaire response indicated a serious question or concern about the existing classification description or duties, the consulting team member designated that the respondent and classification be subject to further job audit through interview. Furthermore,

additional audits were conducted where information on the questionnaire prepared by the employee was either incomplete, unclear or contained terminology, concepts or procedures not well understood by the study team; and where there were unusual situations such as conflicts of responsibility between positions, or jobs which contained several distinct occupational specialties. These interviews were used to expand upon the information provided in the questionnaire and to clarify instances where there appeared to be a discrepancy in job content.

Field audit interviews were conducted with approximately 150 employees covering 124 job classifications, using a structured interview guide developed for this purpose. A copy of the interview guide utilized is included as Appendix B. Both individual and group interviews were conducted. The interviews were useful in clarifying job data and understanding the relationship of one job to another. The interviews were also conducted to ensure that classifications whose incumbents' writing skills were not as strong as other employees were not at a disadvantage. Interviews were conducted with a cross-section of employees covering many departments. Appendix C lists those classifications interviewed during the field audit process. During the evaluation process, additional employees and/or supervisors were contacted where further clarification was required.

As a result of the review and the interview process, questionnaires were selected that would subsequently be used by the evaluation teams. For each classification where more than five questionnaires were received, our consultants selected approximately five of these questionnaires which they believed best described the overall classification. This selection process was performed for two reasons. First, it would have been impractical, counter-productive and often confusing for evaluation teams to read through as many as 85 questionnaires to do one evaluation. Second, we were able to choose questionnaires that were the most thoroughly completed and that were most representative of the overall classification. In addition, we were able to eliminate questionnaires potentially confusing to evaluators due to an issue of apparent misclassification or an unresolved dispute between subordinate and supervisor as to what constitutes actual job duties.

It is important to note that the job analysis process was not intended to determine the correct allocation of each of the more than 18,000 State of Iowa Merit System employees to the appropriate classification per se. While we did identify individuals we considered to be misclassified and did identify classifications that we believe ought to be combined or re-titled (refer to Task 6 of this section of the report), our efforts primarily were intended to

provide current, accurate, complete information in a consistent format to the job evaluation teams. The Iowa Merit Employment Department will have to continue to review positions to determine proper classification on an on-going basis. To assist them in this process, we identified the questionnaires that we believe require attention.

Task 3 - Develop and Test the Evaluation System

The objective of this task was to develop appropriate methods for examining and determining the relative value of each job classification under study. Determination of relative job value was central to this project because it addressed the issue of internal equity, or the fair relationship among job classifications. Our prior experience in performing similar studies for government entities suggested that the most appropriate approach was to develop and use a point factor evaluation plan. In this approach, compensable factors appropriate to the aims of the organization are identified, developed, and weighted relative to each other in order of importance. For each factor, a scale is devised representing increasing levels of "worth." Specific degrees within each factor are defined and point values for each degree are assigned within the appropriate range of the factor. Rating is done by deciding which degree definition best fits the job classification being considered, and the corresponding point value is selected. When all factors have been rated, the sum total of points represents a global index of the value or overall worth of the job classification in question. In developing a plan based on the concept of comparable worth, the Steering Committee required the following criteria to be met:

- Documented and capable of outside verification,
- Based on principles outlined by House File 313,
- Equitable and consistent applicability for the range of job classifications evaluated,
- Easily understood by the personnel who will administer the program,
- Flexibility in responding to changes in job functions and organizational design,
- Facilitates periodic auditing,
- Minimum maintenance required on an ongoing basis.

Specific subtasks required in the development and completion of the evaluation system are described below.

3.1 - Review and analyze the "Iowa Plan"

Over the past few years, the Iowa Merit Employment Department has been acutely aware of the need for a comprehensive job evaluation system that could be effectively utilized to delineate and validate salary relationships. During the past ten years, a series of evaluation systems have been tested. Most recently, a proposed point-factor system known as the "Iowa Plan" was developed and tested, but not implemented. We found that approximately 113 job classifications had been evaluated utilizing this approach.

The first step in developing the evaluation system for the comparable worth study was to assess the accuracy and appropriateness of the "Iowa Plan." The purpose of this review was to identify any strengths or problems in the system to determine whether it could be used for the study.

We statistically analyzed the application of the "Iowa Plan" evaluation methodology to identify the importance of factors in class ratings and the inter-correlation between factors. We conducted regression analyses to identify the factor weights resulting from these evaluations. Data were analyzed for all classes as well as for male and female dominated classes. The weights defined for male classes were used to predict the evaluations for female classes to determine if differences existed. Additionally, the application and weighting of factors was reviewed to determine if identified differences result from a few factors. We also identified factors within the evaluation system which required better definition. We interviewed job analysts to determine which factors were difficult for them to use, and applied our own experience. Through this process, we developed considerable insight which assisted us in developing the final evaluation system.

3.2 - Develop evaluation system

The use of multiple job evaluation plans within an organization, with differing value criteria for each "job family," precludes investigation of systematic inequity in pay, since each plan provides a unique definition of job value. Therefore, it was determined that a single job evaluation system

needed to be developed for all merit system employees. Previous studies we have conducted, including a comparable worth study for the State of Michigan, have shown that a single comprehensive point factor job evaluation plan can be used reliably and accurately across a broad range of occupations typical of state employment. It is generally accepted that no absolute universal standard of job worth exists or is likely to exist by which the value or worth of all jobs in our society can be measured. We have concluded that a useful job evaluation system should be custom-designed to fit a given organization, particularly where there is a diversity of jobs, and where several levels of jobs must be evaluated. We believe it is inappropriate to force jobs into a predetermined "off the shelf" evaluation system. Beyond being customized, the system should be easy to use--it must make sense to employees and be understood and accepted by the people who must continue to use it over time. The ranking of jobs tends to be highly dependent on which factors are used in the evaluation and how heavily each factor is weighted. Therefore, it was necessary to develop a system for the State of Iowa which established the job characteristics worthy of compensation. House File 313 established the overall value judgment or policy for determining comparable worth in the state government. "As used in this section, 'comparable worth' means the value of work as measured by the composite of skill, effort, responsibility, and working conditions normally required in the performance of work."

In determining what specific factors ought to be included within these four categories, it is important to ensure that they correspond to the characteristics of the State's labor force. A problem with traditional approaches to job evaluation is that for the most part they reflect their industrial origin. The factors selected take into account changes in the content of jobs to reflect the nature of technical and service jobs that did not exist when these plans were originally developed.

We were sensitive to selecting and defining factors from a comparable worth standpoint. Some job evaluation methods appear to be oriented in favor of "male" job duties and responsibilities. For example, occasional lifting of heavy objects or responsibility for money or materials (characteristics of male-dominate jobs) are generally valued more than frequent lifting of lighter objects, manual dexterity, or responsibility for people (characteristics of female-dominated jobs).

The scales of job value or "factors" in many job evaluation plans tend to be conceptually and statistically redundant. If the measures of job value provided by these redundant factors are associated with jobs held primarily by individuals of one sex, the evaluations of these jobs would be improperly inflated. Male bias in language defining factors and degrees has also been built into earlier systems. Our efforts were concentrated to overcome these problems and identify factors that appropriately valued all types of State jobs, irrespective of sex.

The relative weight accorded the different compensable factors used can also have substantial impact on the resulting hierarchy of job worth. Different sets of weights can substantially alter the ordering of jobs. Since men and women still tend to be segregated into different types of jobs, significant differences in pay can result. In most traditional approaches, the weighting of the various factors in a job evaluation plan is generally carried out so as to maximize the correspondence between the resulting measure of job value and the wage rates in the labor market. This type of system thus tends to preserve the status quo, including any biases which existed in the pay rates used as the criterion of appropriate pay (labor market rates).

Our approach established an evaluation method which defined job value without primary reliance on the prevailing labor market. Such a plan constitutes an idealized concept of the value of jobs to the State. Adjustments to compensation rates necessary to bring actual pay into alignment with this conceptual plan can then be considered, taking into account labor supply in various occupations, competition for human resources, and the ability of the State to allocate resources for compensation purposes. Both the development of the idealized concept of value and the linkage of such value to actual pay rates are properly a matter for review and decision by State policymakers.

In cooperation with the Steering Committee, thirteen "compensable factors" or "value components" of jobs were identified and defined. As described later, several of these factors were comprised of subfactors (for example, Personal Contact was comprised of 2 subfactors - Type of Contacts and Purpose of Contacts). These factors were identified by first reviewing a larger list of factors that define skill, effort, responsibility, and working environment dimensions. The number of degrees of value in each factor and the relative weight of each factor was then determined, reviewed and decided upon with the Steering Committee. The process used by the Steering Committee in determining the weights is described later in this report. The factors and factor weights determined by the Steering Committee to be appropriate for use in this study are the following:

Skill	Weight
. Knowledge-from Formal Training/Education	15%
. Knowledge-from Experience	10%
. Personal Contacts	10%
Effort	
. Job Complexity, Judgment and Problem-Solving	12%
. Guidelines/Supervision Available	5%
. Physical Demands	5%
. Mental/Visual Demands	5%
. Work Pace/Pressures and Interruptions	5%
Responsibility	
. Supervision Exercised	8%
. Scope and Effect	10%
. Impact of Errors	5%
Working Conditions	
. Working Environment	5%
. Unavoidable Hazards/Risks	5%

A much more detailed explanation of the development of the evaluation system, including the statistical methodology and a brief description of each factor, is provided in Section III of this report. The complete job evaluation system is included in Appendix D.

Task 4 - Assemble and Train Evaluation Teams

4.1 - Organize evaluation teams

It was determined by the Steering Committee that the job evaluations should be conducted by a group of representative State employees. Thirty-six State of Iowa employees were selected to be members of evaluation teams. The selection was done in consultation with the Merit Employment Department, various state agencies and the Steering Committee, to assure properly balanced teams of evaluators. Team member demographics were analyzed and members were selected to include a broad cross-section of employees on each team. These employees were grouped into nine teams. Each team was composed of four individuals, two male and two female, to reduce possible rater biases. Further, each team included one personnel specialist employee, one technical/professional employee, one support staff employee, and one supervisory/managerial employee. The teams

included employees from 18 different departments. An attempt was also made to have an appropriate balance of different age groups on each team and a representative from a geographic area outside of Des Moines on each team. Exhibit 1 provides a listing of team members including their department and job classification title.

4.2 - Train evaluation teams

Even a fair and equitable job evaluation system requires judgment on the part of the evaluator. The evaluation of jobs, as is the case with any form of human judgment, is subject to error and unreliability of various types. Job analysis, as a result of cultural stereotypes, may tend to devalue the work typically performed by women. Therefore, we needed to establish procedures and sensitize the evaluators to minimize the impact of any stereotyped perceptions of jobs.

After the employees were selected for the job evaluation teams, we developed and conducted an intensive 3-day training session to orient the team members to the concepts of comparable worth, job evaluation, group dynamics, recognizing and coping with biases, and the point factor evaluation plan developed for this project. The training was intended to reduce the problem of subtle sex stereotyping and bias in job evaluation. Appendix E shows the training session agenda and outline. In addition, a structured procedure was established to minimize evaluator error or bias. A good job evaluation technique requires the job evaluator to apply his/her judgment in a very rigorous, systematic, disciplined way to determine the relative importance of jobs. Appendix D is a copy of the evaluation handbook which included evaluation instructions designed to minimize the rater error and bias. Team members were also provided with appropriate forms and materials to document results. The training continued as the teams began the evaluation process. Our consultants worked on-site as facilitators to ensure that the evaluation system and procedures were followed consistently. Reliability between the teams is also critical. So that job evaluation factor reliability could be assessed, multiple evaluations were scheduled.

Task 5 - Perform Job Evaluation

The State of Iowa evaluation team members independently evaluated all State merit job classifications utilizing the single evaluation system and the detailed information gathered on each job classification. Our consultants assisted and guided the teams when dealing with questions or problems as they arose, and coordinated the entire process.

STATE OF IOWA

Comparable Worth Study

Evaluation Teams

Team	Personnel Analysts	Support Staff	Technical/Professional	Supervisory/Managerial
A	Judi Stark Personnel Mgmt. Specialist 4 Human Services	Jim Meisch Nursery Worker 2 General Services	Rebecca McCreary Revenue Auditor 2 Revenue	Darrel Campbell Highway Engineer 4 Transportation
B	Chuck Patton Executive Assistant Corrections	Clemens J. Gerhard Maintenance Worker 2 Public Defense	Vernell Hall Civil Rights Spec. 3 Civil Rights	Ruth Oberhauser Office Services Supervisor 1 Revenue
C	Judy Cochran Personnel Mgmt. Specialist 3 Commerce	Jo Ann Elliott Secretary 1 Transportation	Ken Hartman Training Officer 2 General Services	Mark Boley Income Maint. Wkr. 4 (Supv.) Human Services
D	Keith Hyland Personnel Mgmt. Specialist 4 Public Health	Judy Allen Design Technician 2 Transportation	Diane Melberg Programmer/Analyst Public Instruction	Bob Haxton Administrative Officer 1 Agriculture
E	Gayla Craven Personnel Mgmt. Specialist 3 Merit Employment	Robert M. Day Resident Treatment Worker Woodward	Ross Orr Management Analyst 2 Human Services	Nancy Exline Associate Superintendent Conservation
F	Phyllis Watson Personnel Mgmt. Specialist 3 Merit Employment	Al Hackney Warehouse Opns. Wkr. Beer & Liquor	Geneva Davis Aff. Act. Comp. Off. 2 Job Service	Marion Conover Fisheries Supervisor Conservation
G	Jerry Groff Personnel Mgmt. Specialist 3 Merit Employment	Audrey Reinhold Resident Treatment Worker Independence	Loren Jacobson Dist. Construction Tech. Transportation	Carol Rice Administrative Officer 2 Public Health
H	Gene Johnson Personnel Mgmt. Specialist 3 Merit Employment	Jan Ruble Secretary 1 Public Instruction	Ron Kozel Environmental Spec. 2 Water & Waste Management	Jan Hardy Public Service Executive 1 Transportation
I	Mike Prey Personnel Mgmt. Specialist 3 Merit Employment	Josette Carroll Clerk 3 Revenue	Bill Holin Food Sanitation Inspector, Agriculture -And- Martha Gelhaus* Personnel Management Specialist 2 Human Services	Janet Specht Nursing Director Human Services

*Served as alternate and replaced B. Hollin during evaluation process.

Exhibit 1

5.1 - Conduct evaluations

Utilizing all sources of information regarding the job classifications under study and the frame of reference established in the training sessions, teams were assigned job classifications to evaluate. Our consultants worked closely with teams to facilitate the evaluation process. One consultant was assigned to three teams to serve as a resource person and to help bring a consistent frame of reference from her/his work with the other groups. The three team leaders met on a regular basis to ensure that the teams were utilizing the system in a consistent, uniform manner.

In order to analyze and evaluate inter-group reliability, there was some overlap of job classifications assigned to the teams. That is, job classifications were evaluated by more than one team and the results of their evaluations were compared. Although we have found reliability to be fairly high in previous studies, we believed this analysis served several important functions. First, it provided an early indicator if there was a systematic difference in evaluation by any team. Second, it served to provide confidence in the system and documentation in establishing that job classifications were being evaluated in accordance with the concept of comparable worth. These comparisons of team ratings provided the data needed to test inter-rater reliability.

Data collection for the inter-rater team reliability analysis was structured so that during the first few weeks of evaluation, 20 job classifications were evaluated by 2 teams, 6 job classifications were evaluated by 3 teams, and 2 job classifications were evaluated by all 9 teams. To continuously test reliability, we had the teams evaluate at least one job classification each day that had been done by another team. In total, 90 job classifications (98 separate pairs of comparisons), representing both male- and female-dominated classes, were evaluated by more than one team. The results of this analysis showed that most factors were assessed with acceptable reliability. Exhibit 2 sets forth the reliability coefficients for each factor. The inter-team job evaluation reliabilities for 13 of the 17 initial factors (or an aspect of a factor) were above .70, and the reliability of determining total points or the overall global value or worth of the job (based upon committee assigned factor weights) was .89. For those three factors where the reliabilities fell below .70, changes were subsequently made either by reducing the degree levels utilized (Mental/Visual Demands; Work Pace/Pressures; and Interruptions) or by eliminating the factor (Supervision Exercised-Location).

Exhibit 2

STATE OF IOWA

Comparable Worth Study

Reliability Between Teams in Job Evaluations

	Reliability Coefficient*
Knowledge From Formal Training/Education	.92
Knowledge From Experience	.75
Complexity, Judgment, and Problem-Solving	.85
Guidelines/Supervision Available	.73
Personal Contacts--Purpose	.77
Personal Contacts--Type	.78
Physical Demands	.84
Mental/Visual Demands	.55
Supervision Exercised--Nature	.91
Supervision Exercised--Number	.94
Supervision Exercised--Location	.49
Scope and Effect	.73
Impact of Errors	.74
Working Environment	.71
Unavoidable Hazards/Risks	.86
Work Pace/Pressures	.61
Interruptions	.48
Total Points	.89

*Reliability estimated from 98 team pairs.

The evaluation teams were supplied with updated print-outs of the evaluation results periodically throughout the process. These print-outs arranged the results of the evaluations of all teams by class code, in a total job evaluation point hierarchy, and by individual factor/degree. This process allowed each team to gain a uniform perspective of the entire process and provided for a more consistent application of the job evaluation system. This also allowed them to review results and make changes to initial evaluations, where justified.

5.2 - Review and revise evaluations

The Arthur Young consultants reviewed and analyzed all evaluations to ensure a uniform application of the evaluation system, and monitored and interpreted the results to identify any potential problems with the evaluation process. Any potential inconsistencies were discussed by the consulting team leaders and referred back to the respective teams for reconsideration during the last week of their work. Results of the job evaluations were then presented to the Steering Committee and the Iowa Merit Employment Department for review and comment. In addition, Department Heads with five or more job classifications included within this project were consulted on two occasions to hear their perception of the tentative relationships of the classifications within their areas of responsibility. Questions or concerns raised by the Department Heads or Committee members were discussed and appropriate revisions in the job evaluations were made by the consultants, based upon the additional information and a review of the questionnaires and other source documents to confirm the need for change. The consultants ensured that the nine teams had conducted their evaluations in a consistent and uniform manner.

Degree levels and point values have now been ascribed to each position using the single evaluation system. These degree levels assigned to each classification through the job evaluation process are documented so that the results of the evaluation and the system can be verified by others. Exhibit 3 sets forth the job evaluation results in total point order.

We were able to obtain questionnaire data from 758 of the current total of 810 State Merit System job classifications. There were either no incumbents at the time of the study or no questionnaires returned for the remaining 52 classifications. Of these 52 classifications, 12 have been or will soon be deleted from the current Merit system leaving 798 active State Merit job classifications at the time of the study. The

DATE OF RUN 02/10/84
TIME OF RUN 13.37.43

JOB EVALUATION RESULTS

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL. JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/05/83	AY	00737	40	PUBLIC SERV EXEC V																					
12/05/83	AY	02534	40	PUBLIC HEALTH SVCE CHF II																					
12/05/83	AY	02535	38	PUBLIC HEALTH SVCE CHF I																					
12/05/83	AY	03270	40	MENTAL PRGMS DEPUTY ADM																					
12/05/83	AY	00658	40	COMMERCE SOLICITOR																					
12/05/83	AY	00644	40	DEPUTY CORR PRGG ADMIN																					
12/02/83	AY	00196	40	DATA PROCESS ADM III																					
12/08/83	AY	00455	40	STATE DIR EMPLOY RELATIONS																					
12/04/83	AY	04215	40	HIGHWAY ENGINEER VI																					
12/05/83	AY	00788	37	PUBLIC SERV EXEC IV																					
12/06/83	AY	00503	40	CRIME LABORATORY ADMIN																					
12/08/83	AY	00538	40	UTILITY ADMINISTRATOR II																					
12/08/83	AY	00645	40	ATTORNEY III																					
12/05/83	AY	02515	40	PUBLIC HEALTH DENTAL DIR.																					
12/05/83	AY	00721	40	COMPTROLLERS DIV DIR																					
12/06/83	AY	00417	37	ASS'T TO SUPERINDENT OF BANKING																					
12/08/83	AY	00646	37	REGULATION BOARD COUNSEL																					
12/05/83	AY	00737	36	PERSONNEL MGMT SPEC V																					
12/06/83	AY	00196	36	DATA PROCESS ADM II																					
12/06/83	AY	00456	36	CHIEF INSURANCE CO. EXAM.																					
12/08/83	AY	00728	37	PRIN BUDGET & FISCAL ANAL																					
12/04/83	AY	00417	36	BANK EXAMINATION ANALYST																					
02/04/84	AY	00417	37	BANK EXAMINATION, SUPR.																					
12/06/83	AY	00538	36	UTILITY ADMINISTRATOR I																					
12/04/83	AY	02071	37	DIR OF PUB. HEALTH NURSING																					
12/04/83	AY	00430	37	CREDIT UNION EXAMINATION SUPERVISOR																					
12/08/83	AY	00346	36	TECHNICAL TAX SPECIALIST 4																					
12/04/83	AY	04215	37	CORR. DEPUTY SUPT.																					
12/07/83	AY	04211	37	HIGHWAY ENGINEER IV																					
12/06/83	AY	00788	40	PUBLIC SERV EXEC III																					
12/30/83	AY	00644	34	HEARINGS COMPLIANCE OFFICER III																					
12/05/83	AY	02004	37	DIR OF NURSING																					
12/05/83	AY	04552	34	HEALTH FAC. OFFICER																					
12/05/83	AY	03044	37	PSYCHOLOGIST IV																					
12/04/83	AY	04410	37	CORR. TREATMENT DIR.																					
12/05/83	AY	04410	34	GEOLOGIST 4																					
12/04/83	AY	04415	37	CORR. SECURITY DIR.																					
12/08/83	AY	00465	34	INSURANCE COMPLAINTS SUPV																					
12/08/83	AY	00345	34	TECHNICAL TAX SPECIALIST 3																					
12/06/83	AY	02503	37	DENTIST																					
12/05/83	AY	05103	37	SUPERVISORY VETERINARIAN																					
12/06/83	AY	00417	35	BANK EXAMINER 3																					
12/04/83	AY	03233	37	TREATMENT PROGRAM ADMIN																					
12/08/83	AY	00644	37	ATTORNEY II																					
12/06/83	AY	00370	37	PROPERTY APPRAISER IV																					
12/04/83	AY	04054	37	TRANS PLANNER IV																					
12/04/83	AY	04212	37	HIGHWAY ENGINEER III																					

Exhibit 3

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES
01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/04/80	AY	05316	32	FISHERIES SUPERINTENDENT																					
12/08/80	AY	04551	42	ENVIRONMENTAL PROG SUPV																					
12/04/80	AY	04553	42	VETERINARIAN																					
12/04/80	AY	05315	36	WILDLIFE SUPERINTENDENT																					
12/04/80	AY	04501	42	ACTUARY																					
12/05/80	AY	04504	42	NURSING SERVICES DIR.																					
12/08/80	AY	04502	42	SOCIAL WORK ADMIN I																					
12/04/80	AY	04503	42	DATA PROCESS ADM I																					
12/04/80	AY	04505	42	EDUCATION PRINCIPAL																					
12/05/80	AY	04507	42	SR BUDGET & FISCAL ANAL																					
12/04/80	AY	04508	42	PURCHASING AGENT IV																					
12/04/80	AY	04509	42	PARKS SUPERINTENDENT																					
12/04/80	AY	04510	42	PUBLIC HEALTH NUTRITION DIR																					
12/04/80	AY	05314	36	STATE FORESTER																					
12/08/80	AY	04511	42	DEPUTY INDUSTRIAL COMM																					
12/05/80	AY	04512	42	EDUCATION ADMIN																					
12/05/80	AY	04513	42	PUBLIC SERV EXEC II																					
12/04/80	AY	04514	42	HEARINGS COMPL OFFCR II																					
12/08/80	AY	04515	42	REVENUE AUDITOR V																					
12/08/80	AY	04516	42	PERSONNEL MGMT SPEC IV																					
12/04/80	AY	04517	42	HIGHWAY ENGINEER II (SUPV)																					
12/04/80	AY	04518	42	COORR. EVAL. PROGRAM DIR.																					
12/04/80	AY	04519	42	ASSST. LAW ENF. ACAD. DIR.																					
12/05/80	AY	04520	42	RIGHT OF WAY AGENT V																					
12/05/80	AY	05313	36	CONSERVATION ENFORCE SUPT																					
12/08/80	AY	04521	42	PLANT OPER MGR III																					
12/08/80	AY	04522	42	UTIL REG ENG III (SUPV)																					
12/05/80	AY	04523	42	LAW LIBRARIAN																					
12/05/80	AY	04524	42	PSYCHOLOGIST III																					
12/08/80	AY	04525	42	ASSST DIR PUB HEALTH NURS																					
12/08/80	AY	04526	42	COUNTY SOC SVC DIR III																					
12/08/80	AY	04527	42	UTIL REG ENG III																					
12/08/80	AY	04528	42	ACCOUNTANT IV																					
12/08/80	AY	04529	42	SECURITIES DEALER EXAM.																					
12/08/80	AY	04530	42	SECURITIES EXAMINER																					
12/08/80	AY	04531	42	REVENUE AUDITOR IV																					
12/04/80	AY	04532	42	NAT RESOURCE ENG IV																					
12/08/80	AY	04533	42	CRIMINALIST III																					
12/08/80	AY	04534	42	TECHNICAL TAX SPECIALIST 2																					
12/05/80	AY	04535	42	OUTDOOR RECREAT PLAN III																					
12/05/80	AY	04536	42	CHIEF COMM. ENGINEER																					
12/05/80	AY	04537	42	HEALTH FAC. ENG. CONS.																					
12/05/80	AY	04538	42	SOCIAL WK SUPR VI (SUPV)																					
12/08/80	AY	04539	42	CHIEF UTILITIES REG. ENG.																					
12/05/80	AY	04540	42	DATA PROCESSING MGR																					
12/05/80	AY	04541	42	MED. FAC. CONSULTANT																					
12/04/80	AY	04542	42	SMALL LOAN SUPERVISOR																					

CW RPT 6

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES
01-KNOW.--EDUC. 05-DECISION 09-CONTACT 13-SCOPE EFFECT 17-PACE/INTRUPT
02-KNOW.--EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 18-
03-COMPL. JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/06/83	AY	000441	33	INSURANCE CO. EXAMINER III																					
12/06/83	AY	000442	27	LABOR SAFETY OFFICER																					
12/06/83	AY	000443	27	ASSISTANT STATE FORESTER																					
12/06/83	AY	000444	27	CHILD HEALTH PROFESSION INVESTIGATOR																					
12/06/83	AY	000445	27	HEALTH FAC. SURVEYOR																					
12/06/83	AY	000446	27	HOSPITAL NURS. CONS																					
12/06/83	AY	000447	27	CHILD WELFARE SUPERVISOR																					
12/06/83	AY	000448	27	LAW ENF ACAD TRAIN COORD																					
12/06/83	AY	000449	27	MANAGEMENT ANALYST IV																					
12/06/83	AY	000450	27	NURSE CLINICIAN																					
12/06/83	AY	000451	27	HIGHWAY ENGINEER II																					
12/06/83	AY	000452	27	HIGHWAY TECHNICIAN SUPERVISOR																					
12/06/83	AY	000453	27	RESEARCH SYSTEMS ANAL (SUPV)																					
12/06/83	AY	000454	27	ASSOC SUPT-CONSERVATION																					
12/06/83	AY	000455	27	NURSE SUPV II																					
12/06/83	AY	000456	27	BUDGET ANALYST IV																					
12/06/83	AY	000457	27	ASSISTANT, IOWA VETERANS HOMES																					
12/06/83	AY	000458	27	INSURANCE COMPLAINT ANAL																					
12/06/83	AY	000459	27	INSURANCE POLICY ANALYST																					
12/06/83	AY	000460	27	COUNTY SOC SVC DIR II																					
12/06/83	AY	000461	27	MATERIALS TECH. SUPR. 3																					
12/06/83	AY	000462	27	PUB. HEALTH NURS. SUPV																					
12/06/83	AY	000463	27	PHARMACIST SUPR.																					
12/06/83	AY	000464	27	REGIONAL COLLECTIONS ADMINISTRATOR																					
12/06/83	AY	000465	27	ROADSIDE DEVELOP SPEC III																					
12/06/83	AY	000466	27	PSYCHOLOGIST II																					
12/06/83	AY	000467	27	TREATMENT SERVICES DIR																					
12/06/83	AY	000468	27	PROPERTY APPRAISER III																					
12/06/83	AY	000469	27	CORRECTIONAL SERVICES MANAGER																					
12/06/83	AY	000470	27	COMM DEVELOPMENT DIR																					
12/06/83	AY	000471	27	FACILITIES ENGINEER																					
12/06/83	AY	000472	27	NURSING EDUCATION DIR																					
12/06/83	AY	000473	27	DIRECTOR OF ACTIVITIES																					
12/06/83	AY	000474	27	VETERANS ST DS. OFFICER																					
12/06/83	AY	000475	27	BANK EXAMINER																					
12/06/83	AY	000476	27	INFORMATION SPECIALIST III																					
12/06/83	AY	000477	27	CORRECTIONAL TREATMENT MGR																					
12/06/83	AY	000478	27	COUNTY SOC SVC DIR I																					
12/06/83	AY	000479	27	SOCIAL WKR IV (SUPV)																					
12/06/83	AY	000480	27	SOCIAL WKR V (SUPV)																					
12/06/83	AY	000481	27	STATE PAY ROLL SUPERVISOR																					
12/06/83	AY	000482	27	LEARNING SYS. COMPL. OFFCR I																					
12/06/83	AY	000483	27	BEHAVIOR SYSTEMS PROGRAMMER																					
12/06/83	AY	000484	27	RIGHT OF WAY AGENT IV																					
12/06/83	AY	000485	27	ENVIRONMENTAL SPEC III																					
12/06/83	AY	000486	27	ENV. ENG. III																					
12/06/83	AY	000487	27	NURSE SUPV I																					

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STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES

01-KNOW.-EDUC. 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/05/83	AY	01322	08	STATE ARCHIVIST		
11/22/83	AY	00751	04	PUBLIC SERV EXEC I		
11/22/83	AY	00737	04	SOCIAL WORKER V		
11/22/83	AY	00737	04	COMM.PLAIN EDUCATOR		
11/22/83	AY	04727	04	COMMUNICATIONS ENGINEER		
11/22/83	AY	04727	04	TRANSPORTATION PLANNER III		
11/22/83	AY	00826	03	PURCHASING AGENT III		
11/22/83	AY	00826	03	ADMIN PROGRAM COORDINATOR		
11/22/83	AY	00747	04	REVENUE EXAMINER 4		
11/22/83	AY	04727	04	COMMUNICATIONS MANAGER		
11/22/83	AY	00761	04	SENIOR SYSTEMS ANALYST		
11/22/83	AY	00761	04	CHIEF BRIDGE INSP		
11/22/83	AY	00761	04	SECRETARY CONSULTANT		
11/22/83	AY	00761	04	SAFETY INSPECTION SUPV		
11/22/83	AY	00761	04	INVESTIGATOR IV		
11/22/83	AY	00761	04	INVESTIGATOR III		
11/22/83	AY	00761	04	EDUCATION SUPERVISOR I		
11/22/83	AY	00761	04	EDUCATION SUPERVISOR II		
11/22/83	AY	00761	04	GEOLOGIST		
11/22/83	AY	00761	04	CORRECTIONAL SECURITY MGR		
11/22/83	AY	00761	04	TRANSPORTATION PLANNER II		
11/22/83	AY	00761	04	CHEMIST III		
11/22/83	AY	00761	04	LIFE HEALTH INSUR DIV DIR		
11/22/83	AY	00761	04	MICROBIOLOGIST III		
11/22/83	AY	00761	04	PERSONNEL MGMT SPEC III		
11/22/83	AY	00761	04	NURSING STDS REPR.		
11/22/83	AY	00761	04	BRKOP/CASUALTY INS DIV DIR		
11/22/83	AY	00761	04	MOTOR VEHICLE OFFICER III		
11/22/83	AY	00761	04	UTILITY SPECIALIST		
11/22/83	AY	00761	04	ASSIST DIR-MOTOR VEH ENFORCE		
11/22/83	AY	00761	04	CHAPLAIN		
11/22/83	AY	00761	04	CIVIL RIGHTS SPECIALIST 3		
11/22/83	AY	00761	04	TRAINING OFFICER II		
11/22/83	AY	00761	04	EXECUTIVE ASST		
11/22/83	AY	00761	04	SOCIAL WORKER V		
11/22/83	AY	00761	04	EMPLOYER LIABILITY AUD IV		
11/22/83	AY	00761	04	CORRECTIONAL SUPV II		
11/22/83	AY	00761	04	CONSTRUCTION TECH. III		
11/22/83	AY	00761	04	CONSTRUCTION TECHNICIAN 5		
11/22/83	AY	00761	04	PROGRAM & PLANNING ADM I		
11/22/83	AY	00761	04	PROGRAM & PLANNING ADM II		
11/22/83	AY	00761	04	PHYSICIANS ASSISTANT		
11/22/83	AY	00761	04	MANPOWER RESEARCH ECON III		
11/22/83	AY	00761	04	HIGHWAY MAINTENANCE SUPERVISOR 3		
11/22/83	AY	00761	04	CRIMINALIST II		
11/22/83	AY	00761	04	STATE INDUSTRIES SUPERVISOR		
12/04/83	AY	08002	04	ELECTRICAL MAIN SUPER		

CW RPT 4

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.27.43

FACTOR TITLES
01-KNOW.-EDUC. 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
11/05/83	AY	00202	07	NURSE																					
11/05/83	AY	00203	08	INVESTIGATOR III																					
11/05/83	AY	00204	08	INC MAINT WKR VI (SUPV)																					
11/05/83	AY	00205	07	PLANT PATHOLOGIST																					
11/05/83	AY	00206	08	PARKS SUPERVISOR																					
11/05/83	AY	00207	07	NAT RESOURCE ENG III																					
11/05/83	AY	00208	08	FIELD AUDITOR III																					
11/05/83	AY	00209	08	SURVEYS SUPV.																					
11/05/83	AY	00210	08	STATE VOLUNTEER PROG DIR																					
11/05/83	AY	00211	07	DATA PROCESSING SPEC II																					
11/05/83	AY	00212	07	LAND SURVEYOR II																					
11/05/83	AY	00213	08	ACTIVITIES SPEC II (SUPV)																					
11/05/83	AY	00214	07	ATTORNEY I																					
11/05/83	AY	00215	07	YOUTH COUNSELOR II																					
11/05/83	AY	00216	08	MATERIALS TECH.SUPR.2																					
11/05/83	AY	00217	07	MANAGEMENT ANALYST III																					
11/05/83	AY	00218	07	COMM CORR SERVICES SUPV																					
11/05/83	AY	00219	07	FORESTER III																					
11/05/83	AY	00220	08	AFF ACTION COMP OFF II																					
11/05/83	AY	00221	07	WILDLIFE BIOLOGIST III																					
11/05/83	AY	00222	07	NURSE CONSULTANT																					
11/05/83	AY	00223	04	NURSING EDUCATOR																					
11/05/83	AY	00224	08	INCOME MAINT WKR VI																					
11/05/83	AY	00225	05	INSURANCE RATE ANALYST II																					
11/05/83	AY	00226	07	SYSTEMS PROGRAMMER																					
11/05/83	AY	00227	07	HISTORICAL PRESERV SPEC																					
11/05/83	AY	00228	07	ACCOUNTANT III																					
11/05/83	AY	00229	07	JOB SERVICE SPECIALIST																					
11/05/83	AY	00230	07	REVENUE AUDITOR III																					
11/05/83	AY	00231	07	EDUCATION CONSULTANT																					
11/05/83	AY	00232	07	COMPUTER OPER MGR II																					
11/05/83	AY	00233	07	LIBRARIAN II																					
11/05/83	AY	00234	07	BRIDGE INSP III																					
11/05/83	AY	00235	07	PHYSICAL THERAPIST II																					
11/05/83	AY	00236	08	DIR OF VOTER REGISTRATION																					
11/05/83	AY	00237	07	ENVIRONMENTAL SPEC II																					
11/05/83	AY	00238	07	MECHANICAL MAINT SUPER																					
11/05/83	AY	00239	07	EDUCATOR IV																					
11/05/83	AY	00240	07	SPEECH/LANG PATH II																					
11/05/83	AY	00241	07	DISEASE PREV SPEC II																					
11/05/83	AY	00242	07	LEGAL INSTRUCTOR																					
11/05/83	AY	00243	07	INSURANCE PROGRAM SPEC																					
11/05/83	AY	00244	07	AGRICULTURE MKTG. SPEC.																					
11/05/83	AY	00245	07	PSYCHOLOGIST I																					
11/05/83	AY	00246	07	WORK EVALUATOR																					
11/05/83	AY	00247	08	CREDIT UNION EXAMINER III																					
11/05/83	AY	00248	07	CLAIMS MANAGER																					

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13:07:43

FACTOR TITLES

01-KNOWL.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOWL.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14-
03-COMPL. JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/05/83	AY	005115	27	EMPLOYMENT SERVICE MANAGER																					
12/05/83	AY	005184		HOMEMAKER SERVICES SUPV II																					
12/05/83	AY	005272		REVENUE SUPV. I																					
12/05/83	AY	005276		PHARMACIST																					
12/05/83	AY	005278		INDUSTRIAL HYGIENIST																					
12/05/83	AY	005281		REVENUE AGENT III																					
12/05/83	AY	005284		SYSTEMS ANALYST																					
12/05/83	AY	005285		HIGHWAY ENGINEER I																					
12/05/83	AY	005286		VOCATIONAL ED PRINCIPAL																					
12/05/83	AY	005287		PHARMACY CONSULTANT																					
12/06/83	AY	005288		OCCUPATIONAL THERAPIST II																					
12/06/83	AY	005289		HIGHWAY MAINTENANCE SUPERVISOR 2																					
12/06/83	AY	005290		GRAIN DEALERS EXAMINER SUPV																					
12/06/83	AY	005406		BANK EXAMINER III																					
12/07/83	AY	005407		PLANT OPERATIONS MGR II																					
12/05/83	AY	005433		HISTORICAL EDITOR																					
12/08/83	AY	005435		REVENUE EXAMINER 3																					
12/05/83	AY	005436		CONSERVATION ENFORCE SUPV																					
12/05/83	AY	005437		COMM CONSELOR II																					
12/05/83	AY	005438		ENV. ENG. II																					
12/05/83	AY	005439		PERSONNEL MGMT SPEC II																					
12/05/83	AY	005440		HEALTH PROFESSIONS INVESTIGATOR																					
12/04/83	AY	005441		DIETITIAN II																					
12/05/83	AY	005442		CORRECTIONAL SUPV I																					
12/04/83	AY	005443		PESTICIDE INVESTIGATOR																					
12/04/83	AY	005444		AUTO SHOP SUPERVISOR																					
12/04/83	AY	005445		SENIOR UTILITY ANALYST																					
12/08/83	AY	005446		TITLE REG ENG II																					
12/05/83	AY	005447		PROGRAM PLANNER III																					
12/04/83	AY	005448		TREATMENT PROJECT SUPV																					
12/05/83	AY	005449		SCHOLARSHIP & LOAN SUPV																					
12/05/83	AY	005450		STAT RESEARCH ANAL III																					
12/04/83	AY	005451		INC MAINT WKR V (SUPV)																					
12/07/83	AY	005452		LEAD PROGRAMMER																					
12/04/83	AY	005453		CONSTRUCTION MAINT SUPER																					
12/05/83	AY	005454		BUDGET ANALYST III																					
12/06/83	AY	005455		EMERG. SERV. OFFICER II																					
12/06/83	AY	005456		SOCIAL WKR III (SUPV)																					
12/08/83	AY	005457		MAINT. OPNS. ASST.																					
12/05/83	AY	005458		MILK SANITATION RATING OFF																					
12/05/83	AY	005459		PUBLIC HLTH SANITARIAN II																					
12/05/83	AY	005460		CHIEF ARCH. TECH.																					
12/05/83	AY	005461		SOCIAL WORKER IV																					
12/04/83	AY	005462		MATERIALS FABRICATION INSPEC-2																					
12/04/83	AY	005463		LAND SURVEYOR																					
12/04/83	AY	005464		LAW ENF. INSTRUCTOR																					
12/04/83	AY	031166	26	INC MAINT WKR IV (SUPV)																					

JOB EVALUATION RESULTS

DATE OF RUN 08/10/84
TIME OF RUN 13:57:43

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/04/84	AY	07131	25	AIRPORT FIREFIGHTER SUPV.		
12/04/84	AY	05167		ENTOMOLOGIST		
12/05/84	AY	01017		EDUCATOR III		
12/05/84	AY	03334		RESIDENT TREATMENT SUPR 2		
12/04/84	AY	03334		SOCIAL PARTY SUPERVISOR		
12/05/84	AY	02257		VOC. REHAB. SPECIALIST		
12/06/84	AY	00361		TECHNICAL TAX SPECIALIST 1		
12/04/84	AY	06111		HIGHWAY MAINTENANCE SUPERVISOR 1		
12/05/84	AY	03150		CONSULTANT FOR HANDICAPPED		
12/04/84	AY	04300		SURVEY PARTY CHIEF		
12/03/84	AY	00084		ASSTT DIR OF VOTER REGIST		
12/05/84	AY	00406		ADMINISTRATIVE OFFICER II		
12/04/84	AY	04406		OUTDOOR RECREAT PLAN II		
12/04/84	AY	05443		STATE WATERS SUPT		
12/04/84	AY	00343		REVENUE AUDITOR II		
12/04/84	AY	00343		FIELD AUDITOR II		
12/04/84	AY	00343		EMPLOYER LIABILITY AUD III		
12/05/84	AY	03611		OCCUPATIONAL THERAPIST I		
12/04/84	AY	00611		AIRCRAFT PILOT		
12/04/84	AY	03611		AUDIOLOGIST		
12/04/84	AY	00343		CIVIL RIGHTS SPEC II		
12/04/84	AY	04330		DISTRICT CONSTRUCTION TECH		
12/04/84	AY	05501		CORRECTIONS FARM MANAGER		
12/04/84	AY	02113		ACTIVITIES SPEC. II		
12/04/84	AY	03611		PHYSICAL THERAPIST I		
12/04/84	AY	04470		GEOLOGIST II		
12/04/84	AY	00161		DATA PROCESSING SPEC I		
12/04/84	AY	08031		CONTROL CENTER SUPERVISOR		
12/04/84	AY	00343		ASSTT RETIRE BENEFIT SUPV		
12/04/84	AY	03001		SOCIAL WORKER III		
12/04/84	AY	00343		LIQUOR STORE MANAGER IV		
12/04/84	AY	07311		LAUNDRY SUPV. II		
12/04/84	AY	00161		PROGRAMMER/ANALYST		
12/04/84	AY	04439		DISEASE PREV SPEC I		
12/04/84	AY	08111		DISTRICT MECHANIC		
12/04/84	AY	01017		EDUCATOR II		
12/04/84	AY	01017		EDUCATOR I		
12/04/84	AY	04330		SENIOR HIGHWAY ENG/TRAIN		
12/04/84	AY	06441		CHF POWER PLANT ENG		
12/04/84	AY	00343		PAROLE BD LIAISON OFFICER		
12/04/84	AY	00343		INSURANCE CO. EXAMINER II		
12/06/84	AY	00343		LPN3		
12/04/84	AY	00343		INCOME MAINT WKR V		
12/04/84	AY	00343		INCOME MAINT WKR IV		
12/04/84	AY	04330		ROADSIDE DEVELOP SPEC II		
12/04/84	AY	06211		PLANT OPERATIONS MGR I		
12/04/84	AY	08211		MAINT REPAIRS SUPV		

JOB EVALUATION RESULTS

DATE OF RUN 02/16/84
TIME OF RUN 13.57.43

FACTOR TITLES

01-KNOW.-EDUC 05-PERS. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL. JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/04/83	AY	0611	23	MOTOR VEHICLE INVEST																					
12/04/83	AY	0041	17	MUSEUM TECHNICIAN																					
12/04/83	AY	0064	23	TRANSPORTATION PLANNER I																					
12/04/83	AY	0064	23	DRIVERS LIC HEARING OFFCR																					
12/04/83	AY	0064	23	RIGHT OF WAY AGENT II																					
12/04/83	AY	0044	23	INFORMATION SPECIALIST II																					
12/04/83	AY	0064	23	PHOTOGRAMMETRIST II																					
12/04/83	AY	0064	25	RIGHT OF WAY AGENT III																					
12/04/83	AY	0064	23	BANK EXAMINER II																					
12/04/83	AY	0064	23	EMPLOYER LIABILITY AUDITOR																					
12/04/83	AY	0064	23	CHILD SUPPORT RECOVERY, SUPR																					
12/04/83	AY	0044	23	CERTIFIED VOCATIONAL INSTR																					
12/04/83	AY	0064	23	CORR. COUNSELOR I																					
12/04/83	AY	0064	23	CONSTRUCTION TECH. II																					
12/04/83	AY	0064	23	TRACK INSPECTOR																					
12/04/83	AY	0064	23	MOTOR VEHICLE OFFICER II																					
12/04/83	AY	0064	23	ELEVATOR INSPECTOR																					
12/04/83	AY	0044	23	DIETITIAN I																					
12/04/83	AY	0064	23	INSURANCE RATE ANALYST I																					
12/04/83	AY	0064	23	SENIOR DRIVERS LIC EXAM																					
12/04/83	AY	0064	23	MATERIALS INSPECTOR IV																					
12/04/83	AY	0044	23	THERAPEUTIC DIETITIAN																					
12/04/83	AY	0064	23	STATE INDUSTRIES TECHICIAN																					
12/04/83	AY	0044	23	CHEMIST II																					
12/04/83	AY	0064	23	SENIOR STATE INDUSTRIES TECHNICIAN																					
12/04/83	AY	0044	23	MICROBIOLOGIST II																					
12/04/83	AY	0064	23	MANPOWER RESEARCH ECON. II																					
12/04/83	AY	0064	23	INVESTIGATOR II																					
12/04/83	AY	0044	23	CORRECTIONS FOOD SVCE COOR																					
12/04/83	AY	0064	23	FORESTER II																					
12/04/83	AY	0044	23	FISHERIES BIOLOGIST II																					
12/04/83	AY	0044	23	WILDLIFE BIOLOGIST II																					
12/04/83	AY	0064	25	REFUGEE SPECIALIST III																					
12/04/83	AY	0064	23	TREAS INVEST OFF II																					
12/04/83	AY	0044	23	GROUNDS MAINT SUPER																					
12/04/83	AY	0064	23	PURCHASING AGENT II																					
12/04/83	AY	0044	23	SOILS PARTY CHIEF																					
12/04/83	AY	0044	23	BLDGS. & GROUNDS SUPV.																					
12/04/83	AY	0044	23	PARTS MANAGER																					
12/04/83	AY	0044	23	COMMUNICATIONS TOWER WKR																					
12/04/83	AY	0044	23	RESIDENT TREATMENT SUPR 1																					
12/04/83	AY	0044	23	ELECTRONIC ENGINEER TECH																					
12/04/83	AY	0044	23	TRAINING OFFICER I																					
12/04/83	AY	0064	23	CREDIT UNION EXAMINER II																					
12/04/83	AY	0044	23	ACCOUNTANT II																					
12/04/83	AY	0044	23	LIBRARIAN II																					
12/04/83	AY	0084	23	BOILER INSP																					

CU APT 6

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/04/83	AY	00		UTILITY ANALYST II		
12/05/83	AY	00		CHIEF COMM. TECH.		
12/05/83	AY	00		CHILD SUPPORT RECOVERY OFF		
12/05/83	AY	00		COMMUNICATIONS TECH. II		
12/05/83	AY	00		GRAIN MARKET REPORTER		
12/05/83	AY	00		FIELD SAFETY TECHNICIAN		
12/06/83	AY	00		BUDGET ANALYST II		
12/05/83	AY	00		ASST. DIETITIAN		
12/05/83	AY	00		SPEECH/LANG PATH I		
12/06/83	AY	00		OFFICE SERV. SUPV. II		
12/04/83	AY	00		TRAFFIC SIGNAL TECH. II		
12/04/83	AY	00		MATERIALS FABRICATION INSPEC I		
12/05/83	AY	00		MANPOWER SPECIALIST IV		
12/07/83	AY	00		PROGRAM PLANNER II		
12/05/83	AY	00		CLAIMS SPECIALIST III		
12/04/83	AY	00		FOOD SANITATION SURVEY OFF		
12/06/83	AY	00		GRAIN DEALER & WHSE EXAM		
12/06/83	AY	00		ENVIRONMENTAL SPEC I		
12/04/83	AY	00		YOUTH SERVICES SUPERVISOR		
12/04/83	AY	00		SENIOR MEAT INSPECTOR		
12/07/83	AY	00		AFF. ACTION COMP OFF I		
12/05/83	AY	00		DESIGN TECHNICIAN IV		
12/04/83	AY	00		DRIVERS LICENSE EXAMINER		
12/04/83	AY	00		COMM CORR SERVICES WKR II		
12/05/83	AY	00		PARK RANGER III		
12/06/83	AY	00		LIQUOR STORE MANAGER III		
12/30/83	AY	00		LABOR SAFETY & HEALTH CONS		
12/05/83	AY	00		SOCIAL WORKER II		
12/06/83	AY	00		MANAGEMENT ANALYST II		
12/05/83	AY	00		ADMINISTRATIVE ASST II		
12/05/83	AY	00		ASST SURVEY PARTY CHIEF		
12/04/83	AY	00		BRIDGE INSP II		
12/04/83	AY	00		BRIDGE INSP I		
12/06/83	AY	00		BLDG SERV SUPV II		
12/06/83	AY	00		CRIMINALIST I		
12/06/83	AY	00		EMPLOYMENT COUNSELOR II		
12/06/83	AY	00		UTIL REG ENG I		
12/06/83	AY	00		DATA PROCESSING SUPERVISOR		
12/04/83	AY	00		AIRCRAFT MECHANIC		
12/04/83	AY	00		RADIO STATION SUPV.		
12/04/83	AY	00		CONTROLOGIST		
12/06/83	AY	00		SR. CORRECTIONAL OFFICER		
12/21/83	AY	00		WAREHOUSE SUPERVISOR		
12/07/83	AY	00		JAIL INSPECTOR		
12/04/83	AY	00		SENIOR WEIGHTS & MEASURES INS		
12/05/83	AY	00		YOUTH SERV WKR. III (SUPV)		
12/05/83	AY	00		REVENUE AGENT II		

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/05/83	AY	03[illegible]	25	VOLUNTEER SERVICE DIR II		
12/08/83	AY	03[illegible]	17	YOUTH COUNSELOR I		
12/08/83	AY	03[illegible]	[illegible]	LPN2		
12/05/83	AY	03[illegible]	24	VOCATIONAL INSTRUCTOR SUPV.		
12/05/83	AY	03[illegible]	24	CHIEF OF SECURITY		
12/05/83	AY	03[illegible]	17	INC MAINT WKR III (SUPV)		
12/05/83	AY	03[illegible]	17	MOTOR VEHICLE OFFICER I		
12/05/83	AY	03[illegible]	17	OUTDOOR RECREAT PLAN I		
12/05/83	AY	03[illegible]	17	ELECTRICIAN II		
12/05/83	AY	03[illegible]	24	FOOD PRODUCTION SUPV.		
12/05/83	AY	03[illegible]	17	SOCIAL WORKER I		
12/05/83	AY	03[illegible]	17	SENIOR TRANS PLAN-IN-TRAIN		
12/05/83	AY	03[illegible]	17	VOCATIONAL INSTRUCTOR		
12/05/83	AY	03[illegible]	17	COMPUTER OPER MGR I		
12/05/83	AY	03[illegible]	17	CONSERVATION OFFICER		
12/05/83	AY	03[illegible]	17	EMPLOY LIAN COLL OFFCR		
12/05/83	AY	03[illegible]	17	ADMINISTRATIVE OFFICER I		
12/05/83	AY	03[illegible]	17	ARCHITECTURAL TECH II		
12/05/83	AY	03[illegible]	17	VOLUNTEER SERVICE DIR I		
12/05/83	AY	03[illegible]	17	INSURANCE & CLAIMS INVEST		
12/05/83	AY	03[illegible]	17	RESTORATION PAINTER		
12/05/83	AY	03[illegible]	17	CORR BLDG SVCS COORD		
12/05/83	AY	03[illegible]	17	CRIMINAL ANALYST		
12/05/83	AY	03[illegible]	17	PSYCHOLOGY ASSISTANT		
12/05/83	AY	03[illegible]	17	PARK RANGER II		
12/05/83	AY	03[illegible]	17	ROADSIDE DEVELOP SPEC I		
12/05/83	AY	03[illegible]	17	GEOLOGY RESEARCH DRILLER		
12/05/83	AY	03[illegible]	17	GROUNDS MAINTENANCE TECHNICIAN		
12/05/83	AY	03[illegible]	17	CONSTRUCTION TECH. I		
12/05/83	AY	03[illegible]	17	DAIRY PRODUCTS INSP.		
12/05/83	AY	03[illegible]	17	CIVIL RIGHTS SPEC I		
12/05/83	AY	03[illegible]	17	ACCOUNTING TECHNICIAN III		
12/05/83	AY	03[illegible]	17	INVESTIGATOR SPEC. I		
12/05/83	AY	03[illegible]	17	AGRI PRODUCTION SUPV		
12/05/83	AY	03[illegible]	17	AUTO MECHANIC LEADER		
12/05/83	AY	03[illegible]	17	PLANNING AIDE IV		
12/08/83	AY	03[illegible]	17	MATERIALS INSPECTOR III		
12/05/83	AY	03[illegible]	17	SMALL LOAN EXAMINER II		
12/05/83	AY	03[illegible]	17	INCOME MAINT WKR III		
12/05/83	AY	03[illegible]	17	MEDICAL RECORDS ADMIN		
12/05/83	AY	03[illegible]	17	BLDG SERV SUPV I		
12/05/83	AY	03[illegible]	17	PUBLIC HEALTH DEN HYGIEN		
12/05/83	AY	03[illegible]	17	REVENUE EXAMINER II		
12/05/83	AY	03[illegible]	17	FACILITIES MAINT COORD		
12/05/83	AY	03[illegible]	17	CONSERVATION PROGRAM COORD		
12/08/83	AY	03[illegible]	17	LIQUOR STORE MANAGER II		

CW RPT 6

STATE OF IOWA COMPARABLE WORTH STUDY

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

JOB EVALUATION RESULTS

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL. JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/05/83	AY	00408	24	MANPOWER SPECIALIST III																					
12/05/83	AY	00409	22	MANPOWER SPECIALIST II																					
11/04/83	AY	02001		LPN I																					
11/04/83	AY	00801	18	OFFICES SERVICES SUPR																					
11/04/83	AY	00414	18	RIGHT OF WAY AIDE IV																					
11/05/83	AY	00403	18	CLAIMS SPECIALIST II																					
11/04/83	AY	00254	18	FISHERIES BIOLOGIST I																					
11/04/83	AY	00606	18	FORESTER I																					
11/05/83	AY	00534	18	WILDLIFE BIOLOGIST I																					
11/05/83	AY	00455	18	HIGHWAY ENG-IN-TRAINING																					
11/05/83	AY	00605	18	PARK RANGER I																					
11/04/83	AY	00806	18	UTILITIES REGULATION INSP																					
11/04/83	AY	00611	18	RETIREMENT BENEFIT SPEC II																					
11/04/83	AY	00801	18	ELECTRONICS TECH																					
11/04/83	AY	00801	18	COMPUTER OPERATOR III																					
11/04/83	AY	00801	18	DATA ENTRY SUPERVISOR II																					
11/04/83	AY	00414	18	STATE INDUST SALES REPR																					
11/04/83	AY	00611	18	POWER PLANT ENGR IV																					
11/04/83	AY	00554	18	LIVESTOCK INSPECTOR																					
11/04/83	AY	00554	18	MEAT INSPECTOR																					
11/04/83	AY	00714	18	LAUNDRY SUPV. I																					
11/04/83	AY	00407	18	LIBRARIAN I																					
11/04/83	AY	00455	18	INFORMATION SPECIALIST I																					
11/04/83	AY	00455	18	TRACK CAR OPERATOR																					
11/04/83	AY	00801	18	ASST LIQUOR STORE MGR II																					
11/04/83	AY	00801	18	CHIEF TELETYPE OPERATOR																					
11/04/83	AY	00801	18	EMPLOYMENT COUNSELOR I																					
11/04/83	AY	00801	18	MACHINIST																					
11/04/83	AY	00801	18	YOUTH SERVICES WORKER III																					
11/04/83	AY	00801	18	CUSTODIAL SUPV																					
11/04/83	AY	00801	18	DRUG ABUSE COUNSELOR II																					
11/04/83	AY	00801	18	LIVESTOCK MKTG. SPEC.																					
11/04/83	AY	00801	18	LIQUOR STORE MANAGER I																					
11/04/83	AY	00801	18	RECRUITMENT SPECIALIST II																					
11/04/83	AY	00801	18	ADMINISTRATIVE ASST II																					
11/04/83	AY	00801	18	PERSONNEL MGMT SPEC I																					
11/04/83	AY	00801	18	MANAGEMENT ANALYST I																					
11/04/83	AY	00801	18	TREAS INVEST OFF I																					
11/04/83	AY	00801	18	SIGN LANG INTERPRETER																					
11/04/83	AY	00801	18	COMM CORR SERVICES WKR I																					
11/04/83	AY	00801	18	BUDGET ANALYST I																					
11/04/83	AY	00554	18	AGRIC. PRODUCTS INSPEC.																					
11/04/83	AY	00801	18	ASST SOILS PARTY CHIEF																					
11/04/83	AY	00801	18	CARPENTER II																					
11/04/83	AY	00801	18	CHEMIST I																					
11/04/83	AY	00801	18	PROGRAM PLANNER I																					
12/05/83	AY	00442	18	MICROBIOLOGIST I																					

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES
01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/08/83	AY	00744	25	STAT RESEARCH ANAL II		
12/05/83	AY	04411	23	RIGHT OF WAY AGENT I		
12/05/83	AY	07315	23	AIRPORT FIREFIGHTER		
12/04/83	AY	00744	23	COMMUNICATIONS OPERATOR II		
12/04/83	AY	00744	23	FOOD AND SANITATION INSP.		
12/04/83	AY	00744	23	UTILITY ANALYST I		
12/04/83	AY	00744	23	ACCOUNTANT/AUDITOR 1		
12/04/83	AY	00744	23	DIRECTOR OF ELECTIONS		
12/04/83	AY	00744	23	RESPIRATORY THERAPY TECH		
12/04/83	AY	00744	23	PURCHASING AGENT I		
12/04/83	AY	00744	23	OCCUPATIONAL THERAPY ASST		
12/04/83	AY	00744	23	WELDER		
12/04/83	AY	00744	23	FARM LEADER		
12/04/83	AY	00744	23	EQUIPMENT OPERATOR III		
12/04/83	AY	00744	23	FORESTRY LEADER II		
12/04/83	AY	00744	23	WAREHOUSE LEADER		
12/04/83	AY	00744	23	INCOME MAINT WKR II		
12/04/83	AY	00744	23	VOLUNTEER SVCS SPECIALIST		
12/04/83	AY	00744	23	AUTOMOTIVE MECHANIC		
12/04/83	AY	00744	23	ASST LIQUOR STORE MGR I		
12/04/83	AY	00744	23	REFUGEE SPECIALIST I		
12/04/83	AY	00744	23	CANTEEN OPERATOR II		
12/04/83	AY	00744	23	DAIRY TRADE PRAC. INV.		
12/04/83	AY	00744	23	COMPUTER PROGRAMMER		
12/04/83	AY	00744	23	WEIGHTS AND MEASURES INS.		
12/04/83	AY	00744	23	PLANNING AIDE III		
12/04/83	AY	00744	23	INSTITUTIONAL HOMEMAKER		
12/04/83	AY	00744	23	CORRECTIONAL OFFICER		
12/04/83	AY	00744	23	REVENUE EXAMINER I		
12/04/83	AY	00744	23	TRANS PLANNER-IN-TRAIN		
12/04/83	AY	00744	23	DESIGN TECHNICIAN III		
12/04/83	AY	00744	23	FINGERPRINT TECHNICIAN		
12/04/83	AY	00744	23	PLUMBER II		
12/04/83	AY	00744	23	OFFICE MACHINE REPAIRER II		
12/04/83	AY	00744	23	LABORATORY EQUIP. TECH.		
12/04/83	AY	00744	23	DRUG ABUSE COUNSELOR I		
12/04/83	AY	00744	23	DENTAL HYGIENIST		
12/04/83	AY	00744	23	SCALE MECHANIC		
12/04/83	AY	00744	23	MEDICAL TECHNOLOGIST		
12/04/83	AY	00744	23	PHOTOGRAMMETRIST I		
12/04/83	AY	00744	23	AIR CONDITIONING MECH		
12/04/83	AY	00744	23	SECRETARY II		
11/11/83	AY	00744	23	HIGHWAY ENGINEER TRAINEE		
11/10/83	AY	04713	23	COMPUTER OPERATOR II		
11/10/83	AY	04713	23	COMMUNICATIONS TECH. I		
12/05/83	AY	00744	23	RADIOLOGIC TECHNOLOGIST II		
12/04/83	AY	04750	23	TRAFFIC SIGNAL TECH. I		

STATE OF IOWA COMPARABLE WORTH STUDY
EVALUATION RESULTS -- CONTRACT DES-JOBPAC
JOB TITLES -- FACTOR LEVELS -- SPACE/INTRUPT
SCORED -- EXPERT -- CLERICAL
ENCODED -- EXPERT -- CLERICAL
GUIDE -- EXPERT -- CLERICAL

EVALUATION YEAR	CLASS CODE	CLASS TITLE	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
1987	00000																						

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.48

FACTOR TITLES
01-KNOW.-EDUC 06-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 07-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 08-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 09-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
11/06/80	AY	06141	20	PARTS LEADER		
11/06/80	AY	08045	17	PLUMBER I		
11/06/80	AY	08442	25	POWER PLANT ENGR. II		
11/06/80	AY	08443	17	WATER & DISPOSAL PLT OP II		
11/06/80	AY	00000	17	SYSTEM SUPPORT WORKER III		
11/06/80	AY	06641	17	LOCKSMITH		
11/06/80	AY	07201	16	CUSTODIAL ASSISTANT		
11/06/80	AY	07201	15	COOK II		
11/06/80	AY	00000	18	HEALTH INSPECTOR		
11/06/80	AY	05538	18	FISHERIES TECHNICIAN		
11/06/80	AY	00000	24	TRAINING FACILITIES SUPV		
11/06/80	AY	00000	17	TREASURER'S CASHIER		
11/06/80	AY	00000	17	RIGHT OF WAY AIDE III		
11/06/80	AY	00000	15	YOUTH SERVICES WORKER II		
11/06/80	AY	00000	17	PHYSICAL THERAPY AIDE		
11/06/80	AY	07201	17	AUTOMOTIVE BODY REPAIRER		
11/06/80	AY	00000	15	BAKER II		
11/06/80	AY	00000	17	VEHICLE DISPATCHER		
11/06/80	AY	00000	18	GEOLOGICAL TECHNICIAN		
11/06/80	AY	00000	17	AUDIO-VISUAL AIDE TECH		
11/06/80	AY	00000	17	BEAUTY SHOP OPERATOR		
11/06/80	AY	00000	17	ACCOUNTING TECHNICIAN I		
11/06/80	AY	00000	16	CLERK IV		
11/06/80	AY	00000	17	STATISTICAL ASSISTANT II		
11/06/80	AY	00000	17	LAW CLERK		
11/06/80	AY	00000	17	LABORATORY ASSI III		
11/06/80	AY	00000	17	MAINTENANCE REPAIRER		
11/06/80	AY	00000	17	SECRETARY I		
11/06/80	AY	00000	17	CLERK STENO III		
11/06/80	AY	00000	17	PRESCRIPTION CLERK II		
11/06/80	AY	00000	17	THERAPEUTIC TECHNICIAN		
11/06/80	AY	00000	17	ILLUSTRATOR		
11/06/80	AY	00000	17	PARK ATTENDANT		
11/06/80	AY	00000	17	REST AREA ATTENDENT		
11/06/80	AY	00000	15	YOUTH SERVICES WORKER I		
11/06/80	AY	00000	17	ACTIVITIES AIDE		
11/06/80	AY	00000	17	LIBRARY ASSOCIATE		
11/06/80	AY	00000	17	LAUNDRY WORKER II		
11/06/80	AY	00000	17	COMPUTER OPERATOR I		
11/06/80	AY	00000	17	COMPOSITOR		
11/06/80	AY	00000	15	EQUIPMENT OPERATOR I		
11/06/80	AY	00000	17	PURCHASING ASSISTANT		
11/06/80	AY	00000	17	STOREKEEPER II		
11/06/80	AY	00000	17	SEWING ROOM ATTD. II		
11/06/80	AY	00000	17	RADIOLOGIC TECHNOLOGIST I		
11/06/80	AY	00000	17	SPEECH THERAPY TECHNICIAN		
05/18/83	AY	00761	16	PERSONNEL AIDE		

CW RPT 6 STATE OF IOWA COMPARABLE WORTH STUDY PAGE 15

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES

01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/22/83	AY	08516	17	PHOT PROC II		
12/22/83	AY	08347	15	SILK SCREEN FABRICATOR		
12/22/83	AY	02085	14	CENTRAL SUPPLY WORKER II		
12/22/83	AY	01005	14	EDUCATION AIDE		
12/22/83	AY	00025	14	WAREHOUSE OPERATIONS WORKER		
12/22/83	AY	00082	14	WORD PROCESSOR II		
12/22/83	AY	08516	16	RCD EQUIP OPER II		
12/22/83	AY	08516	16	PHOTOGRAPHER		
12/22/83	AY	00302	14	ACCOUNTING CLERK II		
12/22/83	AY	00700	14	ADMINISTRATIVE INTERN		
12/22/83	AY	04700	14	TELETYPE OPERATOR		
12/22/83	AY	06400	14	DRIVER		
12/22/83	AY	03403	14	CIVIL RIGHTS ASSISTANT I		
12/22/83	AY	00300	14	CHIEF TELEPHONE OPER		
12/22/83	AY	00140	20	COMPUTER PROGRAM TRAINEE		
12/22/83	AY	04300	18	ENGINEERING AIDE II		
12/22/83	AY	07116	16	SECURITY GUARD II		
12/22/83	AY	07116	16	MILITARY SECURITY GUARD		
12/22/83	AY	00704	16	UNCLAIMED PROPERTY OFFICER		
12/22/83	AY	00402	14	OFFICE MACHINE REPAIRER I		
12/22/83	AY	08552	14	VOC. REHAB. ASSISTANT		
12/22/83	AY	08001	17	MAINTENANCE LEADER		
12/22/83	AY	04400	17	DESIGN TECHNICIAN II		
12/22/83	AY	00082	14	WORD PROCESSOR I		
12/22/83	AY	08301	15	FURNITURE UPHOLSTERER		
12/22/83	AY	04400	17	GEOLOGICAL AIDE		
12/22/83	AY	07201	14	CANTEEN OPERATOR I		
12/22/83	AY	00001	14	CLERK TYPIST III		
12/22/83	AY	04300	18	PLANNING AIDE II		
12/22/83	AY	08400	19	POWER PLANT ENGR. I		
12/22/83	AY	05001	15	NURSERY WORKER I		
12/22/83	AY	00025	14	LIQUOR STORE CLERK		
12/22/83	AY	07001	14	FOOD SERVICE LEADER		
12/22/83	AY	07001	14	CUSTODIAL LEADER		
12/22/83	AY	00600	16	MICROFILM OPERATOR II		
12/22/83	AY	08400	16	PAINTER I		
12/22/83	AY	07301	10	LAUNDRY WORKER I		
12/22/83	AY	07301	14	INGRED. ROOM WKR. II		
12/22/83	AY	00025	14	MAIL CLERK II		
12/22/83	AY	05461	14	SOIL CONSERVATION AIDE		
12/22/83	AY	00200	14	PHARMACY ASSISTANT		
12/22/83	AY	08701	14	SEWING ROOM ATTDT. I		
12/22/83	AY	04300	12	MATERIALS INSPECTOR II		
12/22/83	AY	04100	18	TOLL COLLECTOR II		
12/22/83	AY	00700	14	STATISTICAL ASSISTANT I		
12/22/83	AY	00500	14	DATA ENTRY OPERATOR II		
12/22/83	AY	07202	12	COOK I		

STATE OF IOWA COMPARABLE WORTH STUDY

JOB EVALUATION RESULTS

DATE OF RUN 02/10/84
TIME OF RUN 13.57.43

FACTOR TITLES
01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	TOTAL POINTS
12/04/83	AY	07225	12	BAKER I		
12/08/83	AY	00114	15	SYSTEM SUPPORT WORKER II		
12/04/83	AY	08615	12	BEAUTICIAN		
12/04/83	AY	00004	11	REDEMPTION CLERK I		
12/04/83	AY	00024	11	CLERK STENO II		
12/04/83	AY	01305	11	CAPITOL GUIDE		
12/04/83	AY	01306	11	LIBRARY AIDE		
12/04/83	AY	00061	14	MANPOWER AIDE II		
12/04/83	AY	00082	15	MAINT. WORKER II		
12/04/83	AY	00614	09	PARTS WORKER		
12/04/83	AY	00225	13	DENTAL ASSISTANT		
12/04/83	AY	00241	11	CONSERVATION WORKER		
12/04/83	AY	00410	11	RIGHT OF WAY AIDE II		
12/04/83	AY	00344	14	RECEPTIONIST		
12/04/83	AY	00345	15	MATERIALS INSPECTOR I		
12/04/83	AY	00500	11	LABORATORY ASST II		
12/04/83	AY	00117	11	CLERK II		
12/04/83	AY	00113	13	SYSTEM SUPPORT WORKER I		
12/04/83	AY	00147	11	TREAS. SUPER. ASST CASHIER		
12/04/83	AY	00344	11	SIGN SHOP WORKER		
12/04/83	AY	00345	11	ENGINEERING AIDE I		
12/04/83	AY	07225	11	SHOT PROC I		
12/04/83	AY	07225	11	MEAT CUTTER I		
12/04/83	AY	00124	11	DATA ENTRY OPERATOR I		
12/04/83	AY	07243	11	CANTEEN CLERK		
12/04/83	AY	08514	11	REP EQUIP OPER I		
12/04/83	AY	00210	11	SECURITY GUARD I		
12/04/83	AY	00303	11	ACCOUNTING CLERK I		
12/04/83	AY	00305	11	MAIL CLERK I		
12/04/83	AY	00000	07	COMMUNITY PROG. AIDE I		
12/04/83	AY	00000	11	STOREKEEPER I		
12/04/83	AY	08101	11	TRADES HELPER		
12/04/83	AY	00500	11	LABORATORY ASST I		
12/04/83	AY	00082	11	MAINT. WORKER I		
12/04/83	AY	00361	11	AUTO SERVICE WORKER		
12/04/83	AY	00024	11	CLERK TYPIST II		
12/04/83	AY	00000	11	MICROFILM OPERATOR I		
12/04/83	AY	07225	11	LINEN ROOM ATTDT. II		
12/04/83	AY	00000	11	MANPOWER AIDE I		
12/04/83	AY	07225	11	FOOD SERVICE WORKER		
12/04/83	AY	04355	15	DESIGN TECHNICIAN I		
12/04/83	AY	08514	11	LAUNDRY WORKER I		
12/04/83	AY	04401	11	PLANNING AIDE I		
12/04/83	AY	07221	11	ENGRVD. ROOM WKR. I		
12/04/83	AY	00024	13	CLERK II		
12/04/83	AY	02085	11	CENTRAL SUPPLY WORKER I		
12/08/83	AY	08101	15	TOLL COLLECTOR I		

DATE OF RUN 02/10/84
TIME OF RUN 13:57:03

JOB EVALUATION RESULTS

FACTOR TITLES
01-KNOW.-EDUC 05-PER. CONTACT 09-SCOPE EFFECT 13-PACE/INTRUPT 17-
02-KNOW.-EXPER. 06-PHYS. DEMAND 10-IMPACT ERROR 14- 18-
03-COMPL.-JUDGE 07-MENT. DEMAND 11-WORK ENVIRON 15- 19-
04-GUIDE.-SUPV 08-SUPV. EXERC 12-HAZARD RISK 16- 20-

EVALUATION DATE	EVAL TEAM	CLASS CODE	PAY GRADE	CLASS TITLE	JOB EVALUATION FACTORS 01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	TOTAL POINTS
12/02/83	AY	00035	10	TELEPHONE OPERATOR	2	1	1	1	1D	2	2	1A	1	1	1	1	1B								00154
12/04/83	AY	07005	11	CUSTODIAL WORKER	2	1	1	1	1D	2	2	1A	1	1	1	1	1A								00154
12/05/83	AY	07360	08	CAPITOL GUIDE AIDE	2	1	1	1	1D	2	2	1A	1	1	1	1	1A								00154
12/07/83	AY	00015	08	CLERK I	2	1	1	1	1A	2	2	1A	1	1	1	1	1A								00154
12/06/83	AY	07315	08	LINEN ROOM ATTDT. I	2	1	1	1	1C	2	2	1A	1	1	1	1	1B								00154
12/07/83	AY	07030	08	ELEVATOR OPERATOR	1	1	1	1	1D	2	2	1A	1	1	1	1	1A								00145

remaining 40 classifications were tentatively evaluated by job analysts from the Merit Employment Department, based upon their perceptions and the existing class specifications, and reviewed by Arthur Young consultants. We recommend that at such time as detailed position analysis data can be obtained from incumbents, these job classifications should be reviewed for consistent application of the system.

Task 6 - Develop Job Classification Pay Grade Structure

Final evaluation results were tabulated based upon the evaluation system. With the completed job evaluations in hand, it was possible to develop a hierarchy of job classifications. The hierarchy served as the basis for development of the job classification pay grade structure.

The initial step in developing recommended job classification pay grade structure involves the development of a structure which classifies or groups similar job classifications. Rationales for developing these groups or divisions are that: (1) relatively modest differences in evaluation results may not indicate true differences in value of positions (partially the function of the judgment inherent in any measuring system), (2) salary administration is simplified when there is a limited number of job classification grades and associated rates, and (3) there must be a sufficient number of salary grades or groups of job classifications to reflect differences in pay levels that would normally be expected based on differences in overall job worth.

The basis for developing the job classification pay grade groupings was the evaluation results generated earlier by the evaluation teams, which were reviewed by our consultants and the Steering Committee. An effort was made to develop logical groupings of job classifications based on a systematic sequence of job evaluation values so that the breaks in job classifications would occur at points where job classifications appeared to differ most clearly in their overall relative value.

When all factors have been rated, the total points accrued by a job represent a global index of the value of the job classification in question. The job classification is assigned to a grade according to the points accumulated. The higher the points, the higher the grade assigned. The point values are considered in constructing the job pay grade structure, and are then used only for future evaluations to place a new or changed job into an appropriate job pay grade.

The job pay grade structure which best provides internal equity, while at the same time creating distinctions among job classifications that are sensible and logical based on changes in job value is provided in Exhibit 4.* The job classification grades were determined using a standard approximate 5.2% increase in evaluation points. The resulting structure of 35 grades (grades 10 through 44) is somewhat less than the current structure with 39 grades (grades 8 through 46). There are, however, several vacant grades in the current structure. We recommend that the State retain both the upper and lower grades for possible future use even though they are currently vacant.

Task 7 - Determine Impact of Proposed System

To understand the impact of the proposed job classification system on employees and the State, we assessed potential impact in several ways. More detailed descriptions of these analyses are found in Section III and IV of this report.

For example, we examined the distribution of degree assignments on each evaluation factor to identify possible peculiarities or problems in degree utilization. We also conducted various regression analyses to identify the statistical weight being carried by each factor in determining total evaluation point scores and to identify factor weights that would generally represent the State's historical pay policy in a manner that is free from any possible sex bias. Intercorrelations and possible redundancy between the job evaluation factors also were examined.

Further, the impact on pay grade of various pay policy models was examined. Specifically, statistically predicted pay grades for jobs were computed for various models and were compared to the jobs' current pay grades. These analyses were conducted separately for female-dominated and male-dominated jobs and are discussed in Section IV of this report.

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* As described in Section IV of this report, a number of statistical models also were used to develop classification pay grade structures based on statistically predicted pay grades. One issue with the statistically-derived structures was a slight tendency for "over-prediction" in pay grade to occur for jobs at the extremes of the job value hierarchy when a linear model was used.

The grade structurer presented in Exhibit 4 attempts to correct for this over-prediction.

For several reasons, these analyses focused primarily on the prediction of pay grade (i.e., grades 8 through 46) rather than salary dollars (i.e., salary range maximum). For example, the State currently has seven different salary plans in the merit employment system. A given pay grade in one plan is intended to represent an equivalent level of job worth as the same grade in another pay plan. However, as a result of collective bargaining and other policy decisions, there is as much as a 5% difference between the pay plans in salary range maximums for identical pay grades. Further, it is not unusual to find curvilinear relationships between measures of job value and salary (in dollars) when analyzing a range of jobs as broad as in this study. This may result, in part, from the common practice in compensation administration of using "percentage" rather "constant dollar" differentials between salary ranges for adjacent pay grades.

Thus, for the purposes of these statistical analyses, it appeared more appropriate to predict pay grade rather than salary range dollars.

We also performed a "post-study" analysis of the proposed pay grade assignments. Exhibit 5 compares the number of male-dominated, female-dominated and mixed classifications in each of the existing pay grades with the number of each category that would exist under our recommended system as set forth in Exhibit 4. This exhibit also compares the percentage of all three types found in each existing pay grade with the percentages resulting from the proposed approach. These data demonstrate that female-dominated classifications would no longer be disproportionately represented in the lower pay grades. Under the current system, female-dominated classifications account for more than 80% or more of the total in 3 of the 4 lower pay grades. This would not be true under the proposed system.

Exhibit 4

State of Iowa

Comparable Worth Study

Proposed Job Classification Pay Grade Structure

Grade	Point Ranges
10	142-149
11	150-157
12	158-165
13	166-174
14	175-183
15	184-193
16	194-203
17	204-213
18	214-224
19	225-236
20	237-248
21	249-261
22	262-275
23	276-289
24	290-304
25	305-320
26	321-336
27	337-354
28	355-372
29	373-392
30	393-412
31	413-433
32	434-456
33	457-480
34	481-504
35	505-531
36	532-558
37	559-587
38	588-618
39	619-650
40	651-684
41	685-719
42	720-757
43	758-796
44	797-837

STATE OF IOWA

Comparable Worth Study

Classification Changes by Grade
for Male-Dominated, Female-Dominated
and Mixed Classifications

Grade	Number in Current Classifications				Number in Proposed Classifications				% in Current Classifications			% in Proposed Classifications		
	Male	Female	Mixed	Total	Male	Female	Mixed	Total	Male	Female	Mixed	Male	Female	Mixed
8		1	2	3						33.3	66.7			
9		3		3						100.0				
10		4	1	5		2	2	4		80.0	20.0		50.0	50.0
11		7	1	8	1	1	1	3		87.5	12.5	33.3	33.3	33.3
12	2	7	3	12	1	4	3	8	16.7	58.3	25.0	12.5	50.0	37.5
13	5	11	3	19	5	8	2	15	26.3	57.9	15.8	33.3	53.3	13.3
14	3	16		19	3	5	2	10	15.8	84.2		30.0	50.0	20.0
15	11	15	5	31	6	15	3	24	35.5	48.4	16.1	25.0	62.5	12.5
16	11	11	4	26	9	11	3	23	42.3	42.3	15.4	39.1	47.8	13.0
17	7	10	3	20	9	12	3	24	35.0	50.0	15.0	37.5	50.0	12.5
18	27	8	4	39	9	14	6	29	69.2	20.5	10.3	31.0	48.3	20.7
19	10	7	5	22	14	7	3	24	45.5	31.8	22.7	58.3	29.1	12.5
20	17	11	5	33	16	10	9	35	51.5	33.3	15.2	45.7	28.6	25.7
21	22	4	9	35	22	11	3	36	62.9	11.4	25.7	61.1	30.6	8.3
22	21	10	11	42	17	11	10	38	50.0	23.8	26.2	44.7	28.9	26.3
23	19	5	9	33	20	8	12	40	57.6	15.2	27.3	50.0	20.0	30.0
24	26	9	12	46	30	11	9	50	56.5	17.4	26.1	60.0	22.0	18.0
25	29	8	6	43	28	6	8	42	67.4	18.6	14.1	66.7	14.3	19.0
26	32	5	13	50	35	7	10	52	64.0	10.0	26.0	67.3	13.5	19.2
27	19	6	4	29	23	3	8	34	65.5	20.7	13.8	67.6	8.8	23.5
28	22	9	9	40	27	12	8	47	55.0	22.5	22.5	57.4	25.5	17.0
29	31	4	13	48	31	5	15	51	64.6	8.3	27.1	60.8	9.8	29.4
30	20	4	9	33	24	5	4	33	60.6	12.1	27.3	72.7	15.2	12.1
31	17	1	2	20	22	4	8	34	85.0	5.0	10.0	64.7	11.8	23.5
32	22	2	4	28	24	3	2	29	78.6	7.1	14.3	82.8	10.3	6.9
33	17	1	2	20	13	1	2	16	85.0	5.0	10.0	81.3	6.3	12.5

STATE OF IOWA

Comparable Worth Study

Classification Changes by Grade
for Male-Dominated, Female-Dominated
and Mixed Classifications (Contd.)

Grade	Number in Current Classifications				Number in Proposed Classifications				% in Current Classifications			% in Proposed Classifications		
	Male	Female	Mixed	Total	Male	Female	Mixed	Total	Male	Female	Mixed	Male	Female	Mixed
34	16			16	10	1	2	13	100.0			76.9	7.7	15.4
35	7			7	8		1	9	100.0			88.9		11.1
36	9			9	8	2		10	100.0			80.0	20.0	
37	5			5	4			4	100.0			100.0		
38	1			1	6			6	100.0			100.0		
39	3			3	2		1	3	100.0			66.7		33.3
40	5	1	1	7	3			3	71.4	14.3	14.3	100.0		
41					1	1		2				50.0	50.0	
42	1			1	2			2	100.0			100.0		
43					3			3				100.0		
44					1			1				100.0		
45														
46	1			1				1	100.0			100.0		
TOTAL:	438	180	140	756										

We also analyzed the relative change in pay grade assignments. That is, we determined to what extent, if any, each male-doiminated, female-dominated and mixed classification's pay grade was increased or decreased as a result of the job evaluation results. Again, we found that female-dominated classifications were favorably affected. One hundred and forty two (78.9%) female-dominated classifications would be placed in a higher pay grade, 18 (10.0%) would stay in the same grade, and 20 (11.1%) classifications would be placed in a lower pay grade. This compares with male-dominated classifications where 236 (53.9%) would be increased and 123 (28.1%) would be decreased; and mixed classifications where 67 (47.6%) would be increased and 48 (34.2%) would be decreased. In total, there was a tendency for classifications to be increased. Four hundred and forty five (58.7%) of all classifications would be increased, while only 191 (25.2%) would be decreased. You would expect some movement in any reevaluation process, especially with the introduction of a new approach. A one or two grade shifting is not uncommon. Therefore, the extent that any classification changes by more than 2 pay grades is particularly relevant. Seventy two (40.0%) of the female-dominated classifications would be increased by more than 2 grades, 104 (57.8%) would be within 2 pay grades, and only 4 (2.2%) would be decreased by more than two pay grades. Seventy six (17.4%) male-dominated classifications would be increased by more than two grades, 330 (75.3%) would be within 2 grades, and 32 (7.3%) would be decreased by more than 2 grades. Twenty seven (19.3%) of the mixed classifications would be increased by more than 2 pay grades, 104 (74.3%) would be within 2 grades, and 9 (6.4%) would be decreased by more than 2 pay grades. The total results of this analysis are set forth in Exhibit 6.

The preliminary conclusions of the implication of project results were reviewed with the Steering Committee. Options for resolving any defined problems with the results or process were identified as well as identifying any necessary additional analysis.

Task 8 - Develop System Update Procedures

No evaluation system can survive in a static state. Positions change and job re-evaluation must occur. As a part of our work, we have provided a means for maintaining the job classification system. We have prepared a job evaluation handbook similar to the one used by the evaluation teams for future reference. The job evaluation handbook is shown in Appendix D. In addition, the final evaluation ratings have been reflected in computer print-outs in the same manner that was used for the teams, so that the Iowa Merit Employment Department can apply the system in a consistent manner in the future. The adjustments, when needed, can then be systematically

STATE OF IOWA

Comparable Worth Study

Relative Change in Pay Grade Assignments
for Male-Dominated, Female-Dominated
and Mixed Classifications

Pay Grade Change	Male-Dominated Classifications (#/% of row/% of column)	Female-Dominated Classifications (#/% of row/% of column)	Mixed Classifications (#/% of row/% of column)	Total (#/% of column)
+9				0 / 0.0
+8		1 / 100.0 / 0.6		1 / 0.1
+7		3 / 75.0 / 1.7	1 / 25.0 / 0.7	4 / 0.5
+6	1 / 9.1 / 0.2	9 / 81.8 / 5.0	1 / 9.1 / 0.7	11 / 1.5
+5	13 / 50.0 / 3.0	9 / 34.6 / 5.0	4 / 15.4 / 2.9	26 / 3.4
+4	18 / 50.0 / 4.1	16 / 44.4 / 8.9	2 / 5.6 / 1.4	36 / 4.7
+3	44 / 45.4 / 10.0	34 / 35.1 / 18.9	19 / 19.6 / 13.6	97 / 12.8
+2	73 / 59.8 / 16.7	31 / 25.4 / 17.2	18 / 14.8 / 12.9	122 / 16.1
+1	87 / 58.8 / 19.9	39 / 26.4 / 21.7	22 / 14.9 / 15.7	148 / 19.5
No Change	79 / 64.8 / 18.0	18 / 14.8 / 10.0	25 / 20.5 / 17.9	122 / 16.1
-1	53 / 57.6 / 12.1	11 / 12.0 / 5.6	28 / 30.4 / 20.0	92 / 12.1
-2	38 / 70.4 / 8.7	5 / 9.3 / 2.8	11 / 20.4 / 7.9	54 / 7.1
-3	21 / 70.0 / 4.8	1 / 3.3 / 0.6	8 / 26.7 / 5.7	30 / 4.0
-4	5 / 62.5 / 1.1	2 / 25.0 / 1.1	1 / 12.5 / 0.7	8 / 1.1
-5	3 / 100.0 / 0.7			3 / 0.4
-6	2 / 100.0 / 0.5			2 / 0.3
-7	1 / 100.0 / 0.2			1 / 0.1
-8				0 / 0.0
-9		1 / 100.0 / 0.6		1 / 0.1
Total	438 / 57.8 / 100.0	180 / 23.7 / 100.0	140 / 18.5 / 100.0	758 / 100.0

Exhibit 6

reviewed and resolved by the professionals in the Iowa Merit Employment Department. Our recommendations for on-going maintenance and administration are included in Section V of this report. In addition to our recommendations, we believe the active involvement of personnel professionals from most departments in the State during this study has greatly enhanced their ability to use this system in years to come.

Task 9 - Implementation of Classification Plan

In adopting an implementation strategy for this study, several important policy decisions need to be made.

9.1 - Changes in job classifications/titles

During the course of the study, we found a number of instances where there was little difference in duties and responsibilities between two job classifications. Our procedure was to have each job classification evaluated by the teams independently. Where the resulting evaluations indicated the job classifications were very similar, we further reviewed the duties and responsibilities to determine if a merger of the two job classifications was possible. Exhibit 7 provides a listing of the job classifications recommended for merging. If our recommendations were implemented, the total number of State of Iowa job classifications would be reduced by 59. The job classifications, as merged, have not been reflected in Exhibit 3, the job evaluation results. The State will have to act upon this separately. We have, however, evaluated the resulting classification for your reference. The recommended job evaluation points are listed next to the proposed new or combined classification.

Title changes are also recommended to more appropriately describe the work being done and to renumber classifications where one level of a series is being proposed for merger. Exhibit 8 sets forth a list of proposed title changes. These changes have not been reflected in Exhibit 3.

9.2 - Determining salary levels

This involves translating job evaluation points into actual salaries--or determining how many dollars in salary each job evaluation point is worth. Several statistical approaches can be used. For example, based on evaluations and salaries for all State jobs, an equation could be developed that best predicts jobs' current maximum monthly salaries. However, with this approach, the predicted salary may reflect any sex bias present in the State's current pay plan.

STATE OF IOWA

Comparable Worth Study

Classifications Proposed for Merging

Current Class Code	Job Classification Title	Eval. Points	Recommended Merged Title	Eval. Points
02522	Public Health Service Chief 2	792	Public Health Service Chief	792
02521	Public Health Service Chief 1	792		
00470	Securities Examiner	446	Securities Examiner	446
00472	Securities Dealer Examiner	446		
02066	Hospital Nursing Consultant	435	Medical Facilities Surveyor	435
04545	Medical Facilities Consultant	437		
04538	Health Facilities Surveyor	435		
00454	Insurance Complaints Analyst	425	Insurance Policy Analyst	425
00455	Insurance Policy Analyst	425		
03021	Social Worker 4 (Supervisor)	413	Soc. Wrkr 4 (Supervisor)	413
03022	Social Worker 5 (Supervisor)	413		
01022	Education Supervisor 2	398	Educ. Supv.	398
01021	Education Supervisor 1	398		
04025	Program & Planning Adm. 2	386	Program & Planning Admin.	386
04224	Program & Planning Adm. 1	386		
03094	Income Maintenance Worker 5	329	Income Maint. Worker 4	329
03093	Income Maintenance Worker 4	329		
05313	Fisheries Biologist 2	319	Conservation Biologist 2	319
05333	Wildlife Biologist 2	319		

Current Class Code	Job Classification Title	Eval. Points	Recommended Merged Title	Eval. Points
01016	Educator 2	331	Educator 1	331
01015	Educator 1	331		
08136	Bridge Inspector 2	302	Bridge Inspector	302
08135	Bridge Inspector 1	302		
00808	Manpower Specialist 3	277	Job Service Interviewer 2	277
00806	Manpower Specialist 2	277		
00853	Claims Specialist 2	277		
05312	Fisheries Biologist 1	277	Conservation Biologist 1	277
05332	Wildlife Biologist 1	277		
08416	Power Plant Engineer 3	247	Power Plant Engineer 3	247
08315	Heating Plant Mechanic	247		
04381	Engineering Office Assistant 2	237	Engineering Office Assistant	237
04380	Engineering Office Assistant 1	237		
00852	Claims Specialist 1	242	Job Service Interviewer 1	242
00840	Manpower Specialist 1	242		
05331	Wildlife Technician	235	Conservation Technician	224
05303	Fisheries Technician	224		
00046	Redemption Clerk 1	187	Accounting Clerk	172
00275	Treasurer's Asst. Cashier	179		
00305	Accounting Clerk 1	172		

Current Class Code	Job Classification Title	Eval. Points	Recommended Merged Title	Eval. Points
00022	Clerk Steno 3	217	Secretary 1	217
00025	Secretary 1	217		
00467	Property Casualty Ins. Div. Dir.	393	Senior Policy Analyst	393
00469	Life/Health Ins. Div. Dir.	393		
00021	Clerk Steno 2	187	Clerk Typist 2	175
00012	Clerk Typist 2	167		
04352	Mat. Tech. Supv. 1	424	Mat. Tech. Supv.	384
04353	Mat. Tech. Supv. 2	379		
02134	Speech Therapy Technician	209	Therapy Assistant	211
02125	Physical Therapy Aide	222		
02575	Voc. Rehab. Assistant	200		
04112	Right of Way Agent 2	327	Right of Way Agent 2	327
04113	Right of Way Agent 3	327		
00546	Util. Reg. Eng. 3	449	Util. Reg. Engr. 3	449
00550	Chief Util. Reg. Engr.	438		
07111	Security Guard 2	203	Security Guard 2	203
07112	Military Security Guard	203		
08672	Electronics Tech.	275		
04735	Communications Tech. 1	248	Electronics Technician	253
04750	Traffic Signal Tech. 1	248		
08677	Office Machine Repairer 2	253		

Current Class Code	Job Classification Title	Eval. Points	Recommended Merged Title	Eval. Points
05317	Fisheries Supv.	431		
05337	Wildlife Supv.	435	Assoc. Supt., Conserv.	435
05420	Asst. State Forester	435		
05225	Assoc. Supt. Conserv.	429		
05220	Parks Supv.	382	Environmental Conservation Supervisor	382
05360	Conserv. Enforce. Supv.	360		
05334	Wildlife Biol. 3	377	Conservation Supervisor	377
05417	Forester 3	377		
02085	Central Supply Worker 1	158	Storekeeper 1	173
00235	Storekeeper 1	169		
02086	Central Supply Worker 2	208	Storekeeper 2	204
0023	Storekeeper 2	211		
00708	Administrative Asst. 1	269	Admin. Asst. 1	269
04007	Planning Aide 3	255		
04008	Planning Aide 4	281	Admin. Officer 1	292
00691	Administrative Officer 1	292		
04006	Planning Aide 2	196		
00072	Military Graves Regist. 2	229	Clerk 4	219
00018	Clerk 4	219		
03166	Income Maint. Worker 4 (Supv.)	347	Income Maint. Worker 4 (Supv.)	347
03167	Income Maint. Worker 5 (Supv.)	353		

Current Class Code	Job Classification Title	Eval. Points	Recommended Merged Title	Eval. Points
03012	Social Worker 1	295	Social Worker 1	295
03016	Social Worker 2	302		
03030	County Soc. Serv. Dir. 1	413	County Soc. Serv. Dir. 1	419
03031	County Soc. Serv. Dir. 2	425		
03352	Vol. Serv. Dir. 1	291	Volunteer Serv. Dir.	298
03353	Vol. Serv. Dir. 2	298		
04005	Planning Aide 1	159		
00071	Mil. Graves Regist. 1	134	Clerk 2	158
00016	Clerk 2	158		
08112	Asphalt Pav. Mach. Oper.	248		
08230	Heavy Equip. Oper.	231	Equip. Oper. 3	243
08113	Equip. Oper. 3	259		
05319	Fisheries Supt.	491		
05339	Wildlife Supt.	491		
05230	Parks Supt.	478	Conserv. Supt.	478
05421	State Forester	478		
05365	Conserv. Enf. Supt.	461		
00276	Treasurer's Cashier	223		
00307	Accounting Clerk 3	230		
00047	Redemption Clerk 2	216	Accounting Tech. 1	223
00290	Accounting Tech. 1	219		

Exhibit 8

STATE OF IOWA

Comparable Worth Study

Proposed Title Changes

Current Title	Suggested Title
Meatcutter 1	Meat Supplies Worker
Bridge Inspector 3	Senior Bridge Inspector
Highway Engineer 6	Highway Engineer 5
Income Maintenance Worker 6 (Supervisor)	Income Maintenance Worker 5 (Supervisor)
Income Maintenance Worker 6	Income Maintenance Worker 5
Social Worker 6 (Supervisor)	Social Worker 5 (Supervisor)
Social Worker 3	Social Worker 2
Social Worker 4	Social Worker 3
Social Worker 5	Social Worker 4
Social Worker 6	Social Worker 5
County Social Services Director 3	County Social Services Director 2
Manpower Aide 1	Job Service Aide 1
Manpower Aide 2	Job Service Aide 2
Manpower Research Economist 2	Job Serv. Research Economist 2
Manpower Research Economist 3	Job Serv. Research Economist 3
Homemaker Services Supervisor 2	Homemaker/Home Health Administrator
Communications Technician 2	Communications Technician
Linen Room Attendant 1	Linen Worker 1
Linen Room Attendant 2	Linen Worker 2
Ingredient Room Worker 1	Ingredient Worker 1
Ingredient Room Worker 2	Ingredient Worker 2
Sewing Room Attendant 1	Sewing Worker 1
Sewing Room Attendant 2	Sewing Worker 2
Right of Way Agent 5	Right of Way Agent 4
Office Machine Repairer 1	Office Machine Repairer
Right of Way Agent 4	Right of Way Agent 3

Two statistical approaches which will eliminate this bias will be described. The first approach assumes that there has been no prior discrimination in the pay for jobs held predominately by males. Therefore, a salary prediction equation is developed based on salaries and evaluation points for male-dominated jobs only. When this equation is applied to female-dominated jobs, it is contended that it provides fair, unbiased estimates of salaries for these jobs, too. The other approach is to derive a prediction equation based on salaries, evaluation results, and job sex composition (i.e., percent of incumbents who are female). When the resulting equation is evaluated, the average "percent female" over all jobs (i.e., 33.5%) is substituted in the equation. This equation estimates appropriate salaries from job evaluation points, with job sex composition statistically held constant.

The equations to predict the maximum salary for each of the three approaches are as follows:

MAXSAL = 89.78 + 2.489 (total eval. pts.) -- (ALL JOBS)

MAXSAL = 109.56 + 2.467 (total eval. pts.) -- (MALE EQUATION)

MAXSAL = 127.75 + 2.426 (total eval. pts.) -- (PERCENT FEMALE CONSTANT)
+ (-.529) (% Female)

NOTE for prediction, replace
"% Female" with 33.5
(this is the mean across all jobs)

To determine maximum salaries for specific classification grades, these equations could be applied to the "midpoint" of evaluation points associated with each of the 35 classification grades described earlier (See Exhibit 4).

Exhibit 9 sets forth the predicted bi-weekly maximum salaries utilizing the three approaches for implementation.

9.3 - Establishing a single pay plan

Current differences in salaries among the seven different pay plans in the merit system for classifications evaluated as being in the same salary grade (or as having "comparable worth") is an issue which must be resolved.

Exhibit 9

STATE OF IOWA

Comparable Worth Study

Summary of Predicted
Salary Grade Maximums
Using Alternative Formulas

Grade	Percent Female	All Jobs	Male Equation
10	$ 463.01	$ 451.93	$ 477.14
11	482.42	471.84	488.24
12	501.83	491.75	507.98
13	522.45	512.91	528.95
14	544.28	535.31	551.15
15	567.33	558.96	577.05
16	591.59	583.85	599.26
17	615.85	608.74	623.93
18	641.32	634.87	649.83
19	669.22	663.49	678.20
20	698.33	693.36	707.81
21	728.66	724.48	738.65
22	761.41	758.08	771.95
23	794.16	791.68	805.25
24	830.55	829.01	842.26
25	868.15	867.59	880.50
26	906.97	907.42	919.97
27	948.21	949.73	961.91
28	989.45	992.04	1003.85
29	1037.97	1033.41	1053.19
30	1086.49	1091.60	1102.53
31	1136.23	1142.63	1153.10
32	1189.60	1197.39	1207.38
33	1246.61	1255.88	1265.35
34	1304.83	1315.61	1324.58
35	1366.70	1379.08	1387.47
36	1432.20	1446.29	1454.08
37	1500.13	1515.98	1523.15
38	1572.91	1590.65	1597.16
39	1649.33	1669.05	1674.87
40	1729.38	1751.19	1756.28
41	1813.08	1837.06	1841.39
42	1901.63	1927.91	1931.44
43	1995.03	2023.73	2026.42
44	2092.07	2123.29	2125.10
Salary Line Equation	127.75 + 2.426(pt) + (-.529) (33.5)	89.78 + 2.489 (pt)	109.56 + 2.467 (pt)

There is currently a unique pay plan for each of the seven "job families" in the merit system:

- Professional/Managerial
- Clerical/Support
- Technical
- Blue Collar
- Fiscal & Staff
- Security
- Public Safety

The actual salaries for the various steps at each grade level can vary considerably. For example, at grade 25 (the highest level found in all 7 plans), the bi-weekly rate for the sixth step ranges from 863.20 to 907.20, a difference of $1,144 on an annual basis.

It appears to us that considerable attention need be paid to this issue. Logically, we submit that under a comparable worth policy, there should be but a single pay plan.

This could create a problem for state policy makers. Currently, several of these pay plans are established by collective bargaining agreements. Presumably, under comparable worth, no group could negotiate a higher rate for its members than the worth (job evaluation results) of their classifications would allow, without subjecting the State to a potential comparable worth discrimination claim. We believe the State needs to consider if a change in Chapter 20 of the statutes is necessary or if perhaps the legislature should recognize that collectively bargained rates constitute a valid defense. We believe a legal opinion is necessary from the Attorney General in this matter.

9.4 - Adjusting individual salaries

After modifying the salary structure, procedures must be established for adjusting individual salaries. Steps must be created for each range and individuals must be placed on the appropriate step. We recommend the use of a uniform six step structure with a 5% difference between each step. In order to initially implement the revised structure, a variety of alternatives are available. One approach is placing each individual at the step they are currently on in their respective pay grade.

- Grant no additional increases until the established maximum rate reaches the incumbent's rate of pay (through structure increases, grade changes, etc.).

- Reduce the employee's salary to the maximum of the wage or salary grade immediately.

- Reduce the employee's salary in a series of steps (for example, 5% every six months) to the maximum pay rate.

Given the particular situations involved, we would recommend that you implement the first option.

9.6 - Appeals procedure

Effective communication of the evaluation system is a vital component in this project. To that end, we have reviewed implementation needs and special problems. In particular, we recommend the use of a formal appeals process at the conclusion of the study to allow employees an opportunity to provide further input. Our recommendations for the appeals process have been presented to the Steering Committee for review and consideration. We recommend the establishment of an independent Appeals Committee that will review and make determinations of appeals that are received. We have also suggested a letter for notifying employees of the impact of the study on their classification, and recommended an appeals form for use by the State. This process is set forth in Section VI.

9.7 - Retroactivity

Another issue which must be addressed is retroactivity of any increase (or decrease) in salary level.

It is our understanding that over the last year a number of requests have been received requesting a re-evaluation. Some of these requests are the result of administrative reorganization and others are a matter of individual interest by employees or their departments to have their classifications reviewed. In many instances, changes in pay grade assignment for these classifications have not been able to be implemented.

- Grant no additional increases until the established maximum rate reaches the incumbent's rate of pay (through structure increases, grade changes, etc.).

- Reduce the employee's salary to the maximum of the wage or salary grade immediately.

- Reduce the employee's salary in a series of steps (for example, 5% every six months) to the maximum pay rate.

Given the particular situations involved, we would recommend that you implement the first option.

9.6 - Appeals procedure

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9.7 - Retroactivity

Another issue which must be addressed is retroactivity of any increase (or decrease) in salary level.

Retroactive pay is typically not provided in the implementation of a new compensation program. Because the methods and factors for determining the worth of a job are new, any evaluation of an individual's position should only reflect what the current job responsibilities are in relation to the new job evaluation plan. In other words, retroactive pay would assume that the job would have been evaluated the same in the past as it was under the new job evaluation plan. We do not believe that assumption should be made and, consequently, retroactive pay should not be given. Pay differences should be effective in accordance with the general implementation strategy adopted by the State.

Task 10 - Prepare and Present Final Report

A draft final report was prepared and reviewed with the Steering Committee, the Governor, and the Iowa Merit Employment Department. Following the review, this final report of work accomplished was prepared, including a description of our methods, analyses, findings and recommendations. Presentations to the legislative leadership, the employees, and various civic and professional organizations have been conducted to explain the study and to answer questions. Work papers and other documents required for effective maintenance of the system have been turned over to the Iowa Merit Employment Department.

III. EVALUATION SYSTEM

An important component of the Comparable Worth study was the development of an evaluation system to determine the relative value of State job classifications. Determination of relative value is important in developing a compensation program because it addresses the need for internal equity. Also, it is important that the compensation program recognize differences between job classifications on the basis of a number of factors, not on whole job ranking.

Job evaluation results in the placement of all job classifications into an appropriate rank order of relative value to the organization and in an estimate of the degree of difference between job classifications. The procedure provides a means for systematically judging internal responsibility relationships between the organization's various job classifications (not the incumbents). By developing a means of systematically appraising the value of each job classification in relation to all others on a common basis, fair and equitable internal relationships among the job classifications can be determined and maintained.

Because of the importance of job evaluation to this study, statistical procedures were conducted to analyze the application of the plan and relationship between job evaluation results and other variables (e.g., current pay grade). This section of the report describes the job evaluation plan and the results of the analyses.

Selection of Job Evaluation System

Our prior experience in performing similar studies suggested that the most appropriate evaluation approach was a "point factor" evaluation plan. In this approach, compensable factors appropriate to the aims of the organization must be identified, developed and weighted relative to each other in order of importance. Specific degrees within each factor are then defined and point values for each degree are assigned within the appropriate range of the factor. Rating is done by deciding which degree definition best fits the job classification being considered, and the corresponding point value is selected.

There are numerous advantages in utilizing the point factor system over other methods of job evalution. It is easier and more objective to independently evaluate a job on a number of relatively narrow compensable factors than to attempt an overall evaluation of the total job. The use of multiple factors also allows more facets of job worth to be explicitly represented, thus suggesting greater equity.

By using predetermined standards against which all job classifications are compared, there is greater objectivity, a feature which appeals to employees and improves acceptance of the evaluation system. In addition, the factors and their weighting have stability which lends further credibility to the evaluation system. Point factor evaluation permits a variety of diverse job classifications to be compared to a stable standard. New job classifications are easily integrated into the system. The ease with which a point factor plan can be administered has made it the most prevalent approach to job evaluation.

Selection of Evaluation Factors

In designing and using a point factor job evaluation system, it is important to assure the evaluation factors employed are relevant and applicable to the job classifications undergoing evaluation. Factors need to be identified that can be used to distinguish between the skill, effort, responsibility, or working conditions found in different job classifications.

As previously stated, our first step was to analyze the "Iowa Plan." Based upon this analysis, we were able to identify areas that required further development. We also met with several groups to identify other potential factors necessary to capture the nature of the myriad of jobs under study. Specifically, we met separately with the Steering Committee, supervisors and analysts from the Iowa Merit Employment Department, and personnel representatives from the various agencies. From these meetings, we identified a very comprehensive list of potential factors or dimensions that could measure skill, effort, responsibility and working conditions.

We worked with the Steering Committee to prioritize these aspects of job worth. Our consulting team then developed 19 potential factors. The Steering Committee and the Iowa Merit Employment Department reviewed these 19 factors and determined that 13 major factors (including some factors which combined elements of the larger lists) appeared to be most appropriate for use in this study. Several of these 13 factors were comprised of subfactors. We defined these factors and established degree levels which we felt would measure the range of jobs to be evaluated.

The following factors were determined to be appropriate compensable factors for initial use in this study with further refinement to these factor subject to the outcome of the statistical analysis conducted on the evaluations resulting from application of the factors:

Factor 1: Knowledge--from Formal Training/Education.

Factor 1 measures the academic preparation and/or technical training at the entry level considered to be "normal" or "typically required" to perform the work. Factor 1 represents the requirements for the job, not the particular educational background of the person holding the job.

Factor 2: Knowledge--from Experience

Factor 2 evaluates the least amount of time normally required for a person with the "typically required" training/education to acquire the knowledge and skills to perform the job satisfactorily.

Factor 3: Job Complexity, Judgment and Problem-Solving

Factor 3 measures the complexity of duties, and the frequency and extent of judgment used in decision-making and problem-solving.

Factor 4: Guidelines/Supervision Available

Factor 4 covers the nature of guidelines and the judgment needed for application. Included are the extent and closeness of supervision required and received for methods to be followed, results to be obtained, and frequency of work progress review.

Factor 5: Personal Contacts

Factor 5 measures the responsibility for effective handling of personal contacts with persons not in the supervisory chain. Discussed is the frequency, purpose, importance, setting and person(s) contacted.

Factor 6: Physical Demands

Factor 6 measures physical effort and fatigue. Considered is the effort, strength, stamina, and endurance necessary to perform the job.

Factor 7: Mental/Visual Demands

Factor 7 measures the coordination and dexterity of mind, eye and hand. Factor 7 includes duration and intensity of the coordination and not intelligence or mental development.

Factor 8: Supervision Exercised

Factor 8 measures the nature and magnitude for supervising subordinates. Indicated are the number of people supervised and the type of supervisory responsibility.

Factor 9: Scope and Effect

Factor 9 measures the relationship between the nature of the work, its purpose, breadth and depth, and the effect of work products or services within and outside the organizational unit.

Factor 10: Impact of Errors

Factor 10 measures the likely effect or probable consequences of potential errors made by an individual in the regular course of the work and the opportunity for making such errors.

Factor 11: Working Environment

Factor 11 evaluates the conditions under which the job must be performed and the extent to which conditions, i.e., heat, cold, rain, snow, dirty or bloody conditions, fumes, noises, unpleasant social encounters, etc., make the job unpleasant.

Factor 12: Unavoidable Hazards/Risks

Factor 12 measures the hazards connected with the performance of the job or the extent and seriousness of potential bodily injury that normally exists in performing the job.

Factor 13: Work Pace/Pressures and Interruptions

Factor 13 measures the degree to which the employee is able to maintain continuity of work and to plan the scheduling and priority of job tasks in advance. Indicated are the changes in work volume and frequency of interruption.

The committee and the consultants also selected preliminary a priori weights to be assigned to each factor based upon their perception of relative importance.

In order to test the system and weights prior to completing all 800 plus job evaluations, a sample of 138 classifications (69 male- and 69 female-dominated jobs) were selected to be evaluated early on in the process. The team evaluation results were then analyzed in the same manner described below for the overall final results. As a result of this initial analysis, it was determined not to change any factors or degrees, but to reassign the a priori weights.

The remainder of the job evaluations were completed and the same statistical analysis was performed. Inter-team reliabilities of the factors were presented earlier in Exhibit 2. Again, it was determined that the factors were appropriate and could measure job worth in the manner intended. However, it became apparent that specific degrees within certain factors were either underutilized or were not reflecting the policy intended by the committee. Therefore, the committee determined that several factors should be modified. Specifically, the following changes were made:

Physical Demands	- Eliminate 5th Degree,
Supervision Exercised--Location	- Eliminate entirely,
Work Pace/Pressures	- Eliminate 4th Degree on each subfactor,
Interruptions	- Eliminate Degree D,
Mental/Visual Demands	- Eliminate 1st Degree,
Personal Contacts--Type	- Eliminate Degree E, and
	- Redefine contacts with clients, residents, inmates and patients as being equivalent to the general public.

Furthermore, upon reviewing the results of the statistical analysis, the committee determined that the preliminary weights again needed to be refined. The Steering Committee established, as their policy, a final set of weights for each factor. In making their determination, they considered the different impacts on male and female jobs, the reliability in the use of the factors, intercorrelation among factors or factor redundancy, the statistically derived weights for predicting current grade levels, and the ways the factors actually acted in determining the final point totals for all jobs.

III. EVALUATION SYSTEM

The compensable factors were assigned weights as listed below:

		Factor Percent of Total
1.	Knowledge-from Formal Training/Education	15%
2.	Knowledge-from Experience	10%
3.	Complexity, Judgment, and Problem-Solving	12%
4.	Guidelines/Supervision Available	5%
5.	Personal Contacts	10%
6.	Physical Demands	5%
7.	Mental/Visual Demands	5%
8.	Supervision Exercised	8%
9.	Scope and Effect	10%
10.	Impact of Errors	5%
11.	Working Environment	5%
12.	Unavoidable Hazards/Risks	5%
13.	Work Pace/Pressures and Interruptions	5%
		100%

Weighting the job evaluation factors creates a set of important interrelationships among the factors; that is, the more important the factor, the higher the relative percentage assigned. The specific weight assigned to each factor represents the relative difference in value or worth to the organization among the factors and becomes the yardstick against which each job classification is measured.

Examinations of the relative weights for each job evaluation factor shown above indicates that greater weight was given to factors related to the content of work as opposed to qualities which define the environment of the job. Accordingly, such content factors as Complexity, Judgment and Problem-Solving; Knowledge-from Formal Training/Education; and Knowledge-from Experience tended to be weighted higher than such factors as Working Environment and Unavoidable Hazards/Risks.

After the relative weight of each factor was determined, each percentage was applied to the total number of points available for the evaluation system (1,000 points), thus establishing the total points for each factor. Point totals were assigned to each degree within the factor based upon the number of degrees within the factor. A geometric percentage relationship was developed among the degrees within a factor. We chose to utilize a geometric progression rather than a straight linear relationship because we believe that this more accurately reflects the relative nature or value of the degrees as they have been defined and as they are found in an organization.

A geometric relationship or progression is one in which a base value increases or decreases as a function of multiplication or division by a constant. The alternatives would have been an arithmetic (adding on constant value) or random (no set value) progression. We do not consider normalizing factors to be as appropriate an approach, although some plans have utilized this method.

Specifically, when developing the points for each degree, the percentage weight assigned the factor determines the number of points assigned to the highest degree in the factor. For instance, Scope and Effect has a factor weight of 10%; therefore, the highest degree (5th) would have a value of 100 points (1,000 x 10%). We then determined how to assign points to the other degrees by a rather pragmatic approach. The system must provide a sufficient number of points and differentiations so that points total will reflect different levels of worth in a way that can later be translated into a money value of the job. Because we are using a single job evaluation system and will recommend a form of linear salary relationship, it is necessary to have a sufficient point spread within the degrees to permit the jobs of greatest worth or value to receive an evaluation point total correspondingly higher than those jobs of least worth or value. Therefore, we divided the maximum salary for the highest paid job (maximum level grade 47 pay plan 000) by the maximum salary for the lowest paid job (step 6 grade 7 pay plan 001), this process resulted in a multiple of 6.478 ($2,612/$403.20). We also considered these same relationships for grades 42 and 8, since they more closely correspond with actual usage of the pay grades. This relationship was a multiple of 4.839 ($2044/$422.40). Thus, we have a relationship where we need to have a multiple of approximately 5 to 6.5 in our point spreads.

Because it is unlikely that the very lowest rated jobs would receive the minimum rating in <u>every</u> factor, and equally unlikely that the highest rated job would receive the highest rating in <u>every</u> factor; we determined that a multiple of approximately 8 to 10 would be most appropriate. Therefore, we identified the constant that could be used to multiply or divide a base value to achieve this spread from the highest to lowest degree on <u>most</u> factors. This would, of course, vary depending somewhat upon the differing number of degrees between factors. We determined that a constant value of 1.66 was most apppropriate. Therefore, the total points for the highest degree was divided by 1.66. Succeeding values are then divided by 1.66 until a value is obtained for all degrees.

Several of the factors contain multiple subfactors and are set up on a matrix. In these instances the same multiple is used along the diagonals and the square roots of the multiple ($\sqrt{1.66} = 1.288$) is used for the intervening steps.

There is, of course, some rounding associated with this process. There is also one deviation from this process on Factor 1, Knowledge-from Formal Training/Education. We used our professional judgment to change the relationship between the 7th and 8th degrees based upon experience in developing evaluation systems. We did this for two reasons: first the overall multiple for the factors would be too great and second we do not believe the difference between these two steps is as great as it is in the preceding steps.

When the Steering Committee ultimately finalized the system and eliminated degrees on several factors and caused the points to be redistributed, the multiples on these factors were reduced. Furthermore, the final assignments of weights caused the multiples on some factors to be expanded. However, the end result was satisfactory. The system provided an overall multiple of 5.52 (800/145 points) between final job evaluation point totals of the highest rated job and the lowest rated job. The final point structure is set forth in Exhibit 10.

STATE OF IOWA

JOB EVALUATION SYSTEM

FINAL POINT STRUCTURE

	Factor	Degree 1	2	3	4	5	6	7	8	Matrix Maximum
1.	Knowledge-Education	6	10	17	29	46	77	129	150	150
2.	Knowledge-Experience	8	13	22	36	60	100			100
3.	Complexity Judgement-Problem Solving	6	10	16	26	43	72	120		120
4.	Guideline/Supervisor	6	11	18	30	50				50
5.	Personal Contacts									

	A	B	C	D	
1.	17	22	28	36	
2.	22	28	36	47	
3.	28	36	47	60	
4.	36	47	60	78	
5.	47	60	78	100	100

6.	Physical Demands	11	18	30	50		50
7.	Mental Visual	11	18	30	50		50
8.	Superv. Exercised						

	A	B	C	D	E	F	
1.	0	0	0	0	0	0	
2.	0	11	14	17	23	29	
3.	0	14	17	23	29	37	
4.	0	17	23	29	37	48	
5.	0	23	29	37	48	62	
6.	0	29	37	48	62	80	80

9.	Scope and Effect	13	22	36	60	100	100
10.	Impact Errors	6	11	18	30	50	50
11.	Work Environment	11	18	30	50		50
12.	Hazards-Risks	6	11	18	30	50	50
13.	Pace/Interruptions						

	A	B	C	
1.	18	23	30	
2.	23	30	39	
3.	30	39	50	50

To examine the final results of application of the State of Iowa Job Evaluation Plan, as revised and approved by the Steering Committee, the same statistical analyses were again conducted. The purpose of these analyses was to identify any potential problems or sex biases in the application of the job evaluation plan. Therefore, analyses were conducted:

- To examine the distribution of degree of assignments on each job evaluation factor.
- To determine the average degree assignment on each factor for jobs of differing sex composition.
- To identify the importance or the statistical weight that each job evaluation factor carried in predicting current pay grade and current job salary under various models.
- To identify the average job evaluation point score on each factor for jobs of differing sex composition.
- To identify the relative internal weights that each of the factors carried (in a statistical sense) in determining total point scores (based upon Steering Committee factor weights) for jobs of different sex composition.
- To examine factor redundancy by reviewing intercorrelations between factors and conducting a "factor analysis."
- To estimate the impact on grade assignments associated with various statistical schemes for weighting the job evaluation factors.

For purposes of these analyses, job sex composition was determined using the "70% rule." That is, a job was defined as being female-dominated if 70% or more of the incumbents were females. A job was defined as male-dominated if 70% or more of the incumbents were males. All other jobs were defined as mixed. In all, 758 jobs were included in the analyses. One hundred and eighty of these were defined as female-dominated by the above definition. Four hundred and thirty eight were male-dominated, and 140 were mixed. Across the 758 jobs, the average percent of incumbents who were female was 33.5%.

The jobs ranged in current pay grade from grade 8 to grade 46. The average current pay grade for the 180 female-dominated jobs was 19.2. The average current pay grade for the 438 male-dominated jobs was 25.8. The average current pay grade for the 140 mixed jobs was 23.5.

Distribution of Evaluations Across Factor Degrees

The purpose of these first analyses was to determine whether each of the possible degrees on a given job evaluation factor was being used. If a given degree level was unused or very infrequently used, consideration should be given in eliminating that degree. In fact, across the 758 jobs in this analysis, all degree levels were used for each of the job evaluation factors. Typically, the distribution of the assignments across the degrees approximated a normal curve. That is, there were relatively few jobs at the low degree levels, relatively few jobs at the high degree levels, and the bulk of the jobs were evaluated at the middle degree levels. Even though some degrees had already been deleted, several factors still showed skewed distributions of evaluations across degree levels. One such factor was Personal Contacts-Type. In this case, 52% of the jobs were evaluated at the highest degree level (i.e., degree D); 54% of the female-dominated jobs were at degree D, 51% of the male-dominated jobs were at degree D, and 51% of the mixed jobs were at degree D. Similarly, 52% of all jobs were evaluated at degree 1 on the Physical Demands factor.

For the factor Mental/Visual Demands, 85% of the jobs were evaluated at the lowest degree level. Further, only five jobs were evaluated at the highest degree level on Mental/Visual Demands; however, these five jobs seem sufficiently distinct from those jobs at the second to highest degree level to warrant retention of the distinction between these degree levels. For both Supervision Exercised-Nature and Supervision Exercised-Number, about one half of the jobs were evaluated at the lowest degree level. (That is, one half of the jobs have no supervisory responsibility.) Only three jobs were assigned to the highest degree level on Supervision Exercised-Number. However, these jobs have such very large numbers of subordinates when compared to those at the second highest degree level that, again, retention of the distinction between these degrees seems appropriate. For the factor Working Environment, 44% of the jobs were assigned to the first degree and only eight jobs were assigned to degree 4. Examination of the content of those eight jobs at degree 4 supports the retention of that degree. For the factor Unavoidable Hazards/Risks, 57% of the jobs were evaluated at the first degree level and only four jobs were assigned to degree 5. Once again, however, the hazards and risks associated with the jobs assigned to degree 5 appear to be sufficiently severe to warrant the distinction currently being made between degree 4 and degree 5 on that factor.

Therefore, even though there is a skewed distribution on some of the job evaluation factors, these distributions appear reasonable when consideration is given to the content of the specific jobs falling at extreme degree levels on the skewed factors. Appendix F presents the distribution of degree assignments on each evaluation factor for jobs of each sex composition.

To summarize the job evaluation results, the average degree assignment on each job evaluation factor was computed separately for male-dominated jobs, female-dominated jobs and mixed jobs. Generally, for a given factor, the average degree assigned to male-dominated jobs was higher than that assigned female-dominated jobs--although in some cases, the averages were quite close. However, for two of the job evaluation factors, the average degree assignment for female-dominated jobs was higher than that for male-dominated jobs. These two evaluation factors were:

- Personal Contacts-Type (mean degree assignment for female-dominated jobs equals 3.30; mean degree assignment for male-dominated jobs equals 3.21).
- Mental/Visual Demands (mean degree assignment for female-dominated jobs equals 2.29; mean degree assignment for male-dominated jobs equals 2.13).

Appendix G presents summary statistics (e.g., mean, standard deviation) for degree assignments on evaluation factors. Summary results are present for all jobs of each sex composition.

Prediction of Current Pay Grade

Regression analyses were conducted to determine the importance and relative weight of each of the job evaluation factors in predicting the current pay grade. The purpose of these analyses was to identify those factors which appear to be most important in determining the pay grades.* As we previously stated, the statistics derived from these regressions can assist in identifying weights to be applied to the evaluation factors that are free from sex bias and yet which estimate current State pay policy. The results of these regressions were provided to the Steering Committee as a reference when establishing the final weight to be assigned to each job evaluation factor. In their book, Women, Work and Wages: Equal Pay for Jobs of Equal Value, Treiman and Hartmann suggest two possible statistical methods for determining factor weights which are unbiased in terms of sex. The authors suggest these procedures may be used to create bias-free job evaluation plans. The procedures may also prove helpful in identifying specific instances of pay discrimination. The first method suggested by the authors is to use a multiple regression approach in which current pay or pay grade is predicted from job evaluation factors and an additional variable defined as the percent of female incumbency in each job classification under study. The second approach uses the pay or pay grades of jobs held mainly by men as the standard of "fair" wages.

* As described in Section III, pay grade was predicted rather than salary dollars in an attempt to correct for salary range differences between the state's seven pay plans and to avoid the strong curvilinear relationships commonly found between job value measures and salary when analyzing a very broad range of jobs.

Each of these approaches was used in the study. The results suggest that a job's current pay grade is highly predictable for the job evaluation factors included in the study. For example, multiple correlations of .96 between current pay grade and the job evaluation factors were found for male-dominated jobs and for female-dominated jobs. In fact, seven of the job evaluation factors individually correlate with current pay grade in the total job sample at .70 or above. These seven factors were:

- Complexity, Judgment and Problem-Solving
- Guidelines/Supervision Available
- Scope and Effect
- Impact of Errors
- Knowledge-From Formal Training/Education
- Personal Contacts--Purpose
- Knowledge-From Experience

In addition, four of the job evaluation factors had negative correlations with current pay grade in the total job sample. These were:

- Physical Demands
- Working Environment
- Unavoidable Hazards/Risks
- Mental/Visual Demands

Finally, the variable "percent of female incumbents" also had a negative correlation with pay grade; this correlation was -.41. A negative correlation means the higher the value on one variable in the correlation, the lower the value on the other variable in the correlation. Therefore, the larger the percentage of the incumbents who are female in a given job, the lower is likely to be its pay grade.

For purposes of determining the relative importance of the job evaluation factors in predicting pay grade, Hoffman's "relative weights" were computed as follows:

$$\text{Relative Weight} = \frac{(\text{Beta})\ (\text{Correlation})}{R^2}$$

The sum of all relative weights for a given set of variables included in a multiple regression equals 100 (within rounding error). This fact allows comparisons to be made between the weights derived from various equations or models. In some cases, negative relative weights may be obtained due to very high correlations between the predictor variables. Such was the case with the current data set. However, where negative weights are obtained, they frequently are for variables which made very little contribution to prediction and thus can be interpreted as approximately zero.

Exhibit 11 presents relative weights for various models. Appendix H presents the regression analyses separately for "percent female," all jobs, female-dominated jobs, male-dominated jobs (male model), and mixed jobs.

The regression analyses and relative weights suggest the same six job evaluation factors are the most important for predicting current grade regardless of whether one uses the "percent female" model for determining factor importance or the "male model" approach. In each case, the most important factors were:

- Knowledge-From Formal Training/Education
- Complexity, Judgment, and Problem-Solving
- Knowledge-From Experience
- Impact of Errors
- Scope and Effect
- Personal Contacts--Purpose

Not only do the same six factors prove to be the most important under either model, but their relative rank of importance was nearly identical. The exception was that Scope and Effect was ranked fifth and Impact of Errors was ranked fourth under the "percent female" model, while these two factors were in the reverse order under the "male model."

An important finding from the multiple regression conducted for all jobs with "percent female" included as a predictor is the contribution of job sex composition to pay. The results of this regression suggest that, holding job content constant (or equal), pay grade decreases at the rate of .0245 pay grades for every one percent increase in the percentage of female incumbents in a job. Therefore, if two jobs were evaluated as having identical job value, but one of them had 100% male and the other job was 100% female incumbents, we would expect under the current pay system to find that these two jobs differ by approximately 2.5 pay grades--even though their worth as measured by the job evaluation system is identical. Similarly, if two jobs had identical worth as determined by the job evaluation system, but exactly 70% of the incumbents in one job were female while exactly 70% of the incumbents in the other job were male, we would expect to find under the current pay structure that these jobs differ by exactly one pay grade.

Exhibit 11

STATE OF IOWA

Comparable Worth Study

Comparison of Statistically Derived Relative Weights

(Based on Prediction of Current Pay Grade)

	All Jobs*	Sex Composition of Jobs: Female-Dominated	Sex Composition of Jobs: Male-Dominated
Knowledge-From Formal Training/Education	24.5[1]	28.8[1]	27.0[1]
Knowledge-From Experience	12.9[3]	8.2	15.9[3]
Complexity, Judgment, and Problem-Solving	18.3[2]	15.8[2]	18.7[2]
Guidelines/Supervision Available	6.6	11.6[5]	1.6
Personal Contacts--Purpose	9.5[6]	13.3[4]	7.8[6]
Personal Contacts--Type	- .1	- 1.0	1.6
Physical Demands	.2	- .4	- .2
Mental Demands	- .6	.7	0
Supervision Exercised--Nature	1.2	- 1.5	4.6
Supervision Exercised--Number	.9	3.8	- 1.1
Scope and Effect	9.9[5]	15.1[3]	13.6[4]
Impact of Errors	10.0[4]	8.9[6]	9.7[5]
Working Environment	0	- .1	1.1
Unavoidable Hazards/Risks	- .1	0	- 1.0
Working Pace/Pressures	.2	- .6	- .6
Interruptions	0	- 2.4	1.3
Percent Female Incumbents	(6.3)	--	--

Footnote: The number in superscript indicates the six most important job evaluation factors in each column.

*"Percent Female" included in equation.

Analysis of Committee Assigned Factor Weights

The Comparable Worth Steering Committee assigned weights to each job evaluation factor which resulted in point scores for each job being analyzed. As already mentioned, several factors were comprised of subfactors; in converting from degree assignments to point score, single point scores were obtained for each of these that reflected the degree assignment on each dimension. As would be expected given the degree assignments described earlier, female-dominated jobs on average received a lower number of points on each job evaluation factor except one; on the factor Mental/Visual Demands, female-dominated jobs on average received a higher number of points than male-dominated jobs. Male-dominated jobs also received a higher number of total points than female-dominated jobs on average ("total points" represents the sum of points accumulated across factors).

To determine whether the committee-assigned weights were in fact operating in the intended ways statistically, regression analyses were conducted. Specifically, point scores on each of the job evaluation factors were used to predict the total point score for each job. Relative weights for each job evaluation factor were then computed. Exhibit 12 summarizes this analysis. The six factors with the largest relative weights were identical to the six most heaviy weighted factors by the committee. The committee weighted Knowledge-From Formal Training/Education as most important, and that was found also to have the largest relative weight. The committee weighted Complexity, Knowledge-From Experience, Personal Contacts and Scope and Effect as the next four most heavily weighted factors. The statistically derived relative weights also showed these four to be the next four most heavily weighted factors. Supervision Exercised was the sixth most heavily weighted factor both by the committee and in terms of the statistically derived relative weights. Generally, the same factors were of most importance for female-dominated jobs and for male-dominated jobs, although there are some slight inversions in the rank order of relative weights.

These analyses suggest the factors which the committee intended to carry the most weight in determining total scores and job worth were in fact doing that in a statistical sense. Appendix I contains statistics used in this analysis.

Factor Intercorrelations

Although the job evaluation plan consisted of sixteen conceptually distinct factors or subfactors on which jobs are evaluated, it is likely that some of these factors or subfactors are somewhat redundant statistically. To examine this, two things were done. First, the intercorrelation matrix among all factors and subfactors was examined. Second, a statistical procedure known as "factor analysis" was conducted to identify the major dimensions underlying the sixteen job evaluation factors.

Exhibit 12

STATE OF IOWA

Comparable Worth Study

Relative Weights of Job Evaluation Factors*

	All Jobs	Sex Composition of Jobs: Female-Dominated	Sex Composition of Jobs: Male-Dominated
Knowledge-From Formal Training/Education	23.7[1]	27.2[1]	22.7[1]
Knowledge-From Experience	15.1[2]	11.9[5]	15.7[3]
Complexity, Judgment, and Problem-Solving	14.6[3]	12.2[4]	15.9[2]
Guidelines/Supervision Available	7.4	8.0[6]	7.5
Personal Contacts	11.9[5]	12.9[3]	12.5[5]
Physical Demands	- 3.5	- 2.0	- 4.8
Mental/Visual Demands	- .8	- 1.8	- .2
Supervision Exercised	7.5[6]	6.3	8.0[6]
Scope and Effect	14.5[4]	13.3[2]	15.5[4]
Impact of Errors	7.4	6.3	7.5
Working Environment	- 1.4	.7	- 3.0
Unavoidable Hazards/ Risks	- .3	.6	- 1.2
Work Pace/Pressures and Interruptions	4.2	4.6	3.9

Footnote: The number in superscript indicates the six most important job evaluation factors in each column.

*From regression with overall total point scores.

The intercorrelation matrix for the sixteen job evaluation factors consisted of 120 correlations. Of these 120 correlations, twelve were .7 or higher:

- Complexity, Judgment, and Problem-Solving with Knowledge-From Formal Training/Education
- Complexity, Judgment, and Problem-Solving with Guidelines/ Supervision Available
- Complexity, Judgment, and Problem-Solving with Personal Contacts--Purpose
- Complexity, Judgment, and Problem-Solving with Scope and Effect
- Complexity, Judgment, and Problem-Solving with Impact of Errors
- Guidelines/Supervision Available with Personal Contacts--Purpose
- Guidelines/Supervision Available with Scope and Effect
- Guidelines/Supervision Available with Impact of Errors
- Guidelines/Supervision Available with Knowledge-From Experience
- Supervision Exercised-Nature with Supervision Exercised-Number
- Scope and Effect with Personal Contacts--Purpose
- Scope and Effect with Impact of Errors

Thirteen additional correlations were between .60 and .70 in size. The factor degree correlation matrix is enclosed as Appendix J.

To more thoroughly analyze the statistical overlap between evaluation factors, a "factor analysis" was conducted. This statistical procedure analyzes the intercorrelation matrix for the job evaluation factors in an attempt to identify a more limited number of underlying dimensions which account for the intercorrelations between the job evaluation factors. Based on this analysis, five underlying dimensions were obtained. For ease of communication, these dimensions were labeled:

- Complexity and cognitive demands. (This dimension was comprised of the job evaluation factors: Complexity, Judgment and Problem-Solving; Knowledge-From Formal Training/Education; Impact of Errors; Guidelines/Supervision Available; Scope and Effect; Personal Contacts-Purpose; and Knowledge-From Experience.)*

* Entries within parenthesis are the job evaluation factors reflecting each major underlying dimension.

- Supervisory responsibility (Supervision Exercised-Number, Supervision Exercised-Nature).
- Physical and environmental demands (Working Environment, Unavoidable Hazards/Risks, Physical Demands).
- Interpersonal demands (Personal Contacts-Type, Mental/Visual Demands; Personal Contacts-Type was positively related to this dimension, while Mental/Visual Demands was negatively related to this dimension).
- Psychological demands (Work Pace/Pressures and Interruptions).

This factor analysis suggests that these are the five major aspects of job content which the job evaluation factors measure. Clearly, it suggests also there is some redundancy between the job evaluation factors. Those job evaluation factors which all grouped together to define one of these major dimensions are somewhat redundant. For example, seven of the factors appear to measure, to some extent, the jobs possessing complexity and cogniture demands. However, this redundancy can be helpful because it can enhance the statistical reliability and accuracy of job evaluation results. Just as one can get a better estimate of an individual's ability in mathematics by giving them a 100-item math test (assuming the items are reliable and valid) rather than a single item test, so too can one better estimate a job's standing on an underlying aspect of the job value identified in that factor analysis (i.e., complexity; supervisory responsibility; physical and environmental demands; psychological demands; interpersonal demands) by measuring these aspects of the job by several job evaluation factors (again providing these factors are reliable and valid) rather than by a single job evaluation factor. Results of factor analysis are set forth in Appendix K.

In summary, based upon our analysis, we believe that the number of factors and degrees utilized is appropriate for the very diverse group of job classifications studied. The factors appear to be present in different amounts in all job classifications and do not overlap excessively in meaning.

IV. IMPLEMENTATION IMPACT

Estimated Impact on Grade Placement for Various Statistical Pay Models

Prediction equations were developed to determine the grade predicted for a given job based on its job content and based on various models for weighting the job evaluation factors. Note that the predicted pay grades discussed here are not based upon the use of the pay grade structure set forth in Exhibit 4; rather they are based on various statistical prediction models. Three of these models used total point scores derived from the committee assigned weighting schemes for the job evaluation factors, and three of these models used purely statistically derived methods for weighting the factors. (These statistically derived weighting schemes were developed from regression equations involving all of the job evaluation factors to predict current pay grade.) The six models are described below:

- A regression equation developed on all jobs in the study and using total point scores derived from committee assigned factor weights. (TOTALL)*
- A regression equation based on male-dominated jobs only and using the total point scores derived from committee assigned factor weights. (TOTMALE)
- A regression equation based on all jobs in the study using total point scores derived from committee assigned factor weights and including "percent female" as a predictor; in determining predicted grade, the regression weight for "percent female" was multiplied times the average percent of female incumbents in all jobs (i.e., 33.5%). (TOTPFEM)
- A regression equation based on all jobs in the study using statistically derived weights for the job evaluation factors. (STATALL)
- A regression equation based on male-dominated jobs only using statistically derived weights for the job evaluation factors. (STATMALE)
- A regression equation based on all jobs in the study using statistically derived weights for the job evaluation factors and including "percent female" as a predictor; in determining predicted job grade, the regression weight for "percent female" was multiplied times the average percent of female incumbents in all jobs (i.e., 33.5%). (STATPFEM)

Exhibit 13 sets forth a listing of the predicted grade for each classification.

*The entries in parentheses are the code names or labels assigned to each model.

COMPARISON OF ACTUAL AND PRED. PAY GRADES

JOB TITLE	JOB CODE	JOB SEX	TOTAL INCUMB	CURRENT GRADE	CURRENT MAX SAL	PRED GRADE - POINTS ALL	PRED GRADE - POINTS MALE EQ	PRED GRADE - POINTS %FEMALE	PRED GRADE - STAT WGT ALL	PRED GRADE - STAT WGT MALE EQ	PRED GRADE - STAT WGT %FEMALE
CLERK I	15	F	10	8	422.40	13	15	13	10	11	11
COMMUNITY PROG. AIDE I	3005	F	11	9	435.20	15	17	16	11	13	12
LINEN ROOM ATTDT. I	7315	F	19	9	454.40	14	15	14	10	12	11
SEWING ROOM ATTDT. I	7320	F	11	9	454.40	16	18	17	14	16	14
CLERK II	16	F	143	10	460.00	14	16	15	11	13	12
TELEPHONE OPERATOR	35	F	20	10	460.00	14	16	15	10	12	11
MICROFILM OPERATOR I	81	F	19	10	460.00	15	16	15	11	12	12
FOOD SERVICE WORKER	7200	F	180	10	470.40	15	16	15	9	11	10
RECEPTIONIST	6	F	36	11	480.00	16	17	16	12	14	13
CLERK TYPIST II	12	F	375	11	480.00	15	16	15	14	17	15
MANPOWER AIDE I	800	F	3	11	480.00	15	16	15	13	16	14
INGRED. ROOM WKR. I	7215	F	11	11	488.00	14	16	15	12	13	12
CANTEEN CLERK	7240	F	15	11	488.00	15	17	16	11	13	12
LINEN ROOM ATTDT. II	7316	F	9	11	488.00	15	16	15	12	15	13
SEWING ROOM ATTDT. II	7321	F	5	11	488.00	17	19	18	15	17	15
CLERK III	17	F	164	12	500.00	16	17	16	15	16	15
CLERK STENO II	21	F	13	12	500.00	16	17	16	15	18	17
DATA ENTRY OPERATOR I	103	F	106	12	500.00	15	17	16	11	14	12
CAPITOL GUIDE	1361	F	3	12	508.00	16	17	16	12	14	13
COOK I	7220	F	69	12	508.00	16	18	16	14	15	14
BAKER I	7225	F	8	12	508.00	16	18	16	14	15	14
BEAUTICIAN	8605	F	8	12	496.80	16	17	16	14	16	15
CLERK TYPIST III	13	F	699	13	521.60	16	18	17	16	18	17
CHIEF TELEPHONE OPER	37	F	4	13	536.00	17	18	17	15	17	16
REDEMPTION CLERK I	46	F	1	13	521.60	16	17	16	15	17	16
WORD PROCESSOR I	60	F	15	13	521.60	17	18	17	14	17	15
MICROFILM OPERATOR II	82	F	9	13	521.60	16	18	17	16	16	16
TREASURER'S ASST CASHIER	275	F	2	13	521.60	16	17	16	15	17	16
ACCOUNTING CLERK I	305	F	76	13	521.60	15	17	16	14	16	15
DENTAL ASSISTANT	2220	F	13	13	520.80	16	17	16	12	14	13
FOOD SERVICE LEADER	7210	F	16	13	528.00	16	18	17	10	12	11
LAUNDRY WORKER II	7306	F	15	13	528.00	17	19	18	12	13	12
BEAUTY SHOP OPERATOR	8610	F	2	13	520.80	18	19	18	17	19	17
CLERK STENO III	22	F	25	14	544.80	18	19	18	18	20	19
SECRETARY I	25	F	473	14	544.80	18	19	18	18	20	19
DATA ENTRY OPERATOR II	104	F	83	14	544.80	16	18	16	14	16	15
MAIL CLERK II	261	F	18	14	549.60	16	18	17	14	16	15
STATISTICAL ASSISTANT I	740	F	11	14	544.80	16	18	17	15	17	16
MANPOWER AIDE II	801	F	54	14	544.80	16	17	16	14	17	15
EDUCATION AIDE	1005	F	34	14	544.80	17	18	18	16	18	16
ACTIVITIES AIDE	2105	F	51	14	544.80	18	19	18	14	16	14
PHYSICAL THERAPY AIDE	2125	F	18	14	544.80	18	19	18	14	16	15
SPEECH THERAPY TECHNICIAN	2134	F	3	14	544.80	17	19	18	17	19	18
PHARMACY ASSISTANT	2225	F	11	14	544.80	16	18	17	14	16	15
VOC. REHAB. ASSISTANT	2575	F	29	14	544.80	17	18	17	17	18	17
RESIDENT TREATMENT WORKER	3201	F	1571	14	544.80	19	20	20	15	16	15
CIVIL RIGHTS ASSISTANT I	3435	F	3	14	544.80	17	18	17	16	17	17
CUSTODIAL LEADER	7010	F	13	14	549.60	16	18	17	13	14	14
INGRED. ROOM WKR. II	7216	F	2	14	549.60	16	18	17	13	15	14
UNCLAIMED PROPERTY OFFICER	44	F	1	15	571.20	17	18	17	17	19	18
REDEMPTION CLERK II	47	F	1	15	571.20	18	19	18	17	19	18
WORD PROCESSOR II	61	F	71	15	571.20	17	18	17	16	18	16
SYSTEM SUPPORT WORKER II	112	F	32	15	571.20	16	18	16	15	17	16
PURCHASING ASSISTANT	205	F	14	15	571.20	17	19	18	18	20	18
ACCOUNTING CLERK II	306	F	92	15	571.20	17	18	17	18	19	18

COMPARISON OF ACTUAL AND PRED. PAY GRADES

JOB TITLE	JOB CODE	JOB SEX	TOTAL INCUMB	CURRENT GRADE	CURRENT MAX SAL	PRED GRADE - POINTS ALL	PRED GRADE - POINTS MALE EQ	PRED GRADE - POINTS %FEMALE	PRED GRADE - STAT WGT ALL	PRED GRADE - STAT WGT MALE EQ	PRED GRADE - STAT WGT %FEMALE
LPNI	2001	F	96	15	570.40	22	23	22	18	20	18
CENTRAL SUPPLY WORKER II	2086	F	2	15	570.40	17	19	18	17	18	17
CHAPLAINCY ASSISTANT	3306	F	2	15	570.40	19	20	19	17	18	17
NURSERY WORKER I	5005	F	1	15	572.80	16	18	17	14	14	14
COOK II	7221	F	19	15	572.80	18	19	18	16	17	16
CANTEEN OPERATOR I	7245	F	6	15	572.80	16	18	17	13	15	14
THERAPEUTIC TECHNICIAN	7340	F	6	15	570.40	18	19	18	17	19	18
PHOT PROC I	8511	F	1	15	570.40	15	17	16	13	13	13
REP EQUIP OPER I	8525	F	21	15	572.80	15	17	16	13	15	14
CLERK IV	18	F	115	16	601.60	18	19	18	19	20	20
SECRETARY II	26	F	184	16	601.60	19	21	20	20	22	21
MICROFILM OPERATOR III	83	F	2	16	601.60	19	20	19	19	20	19
TREASURER'S CASHIER	276	F	1	16	601.60	18	19	18	18	20	19
STATISTICAL ASSISTANT II	741	F	11	16	597.60	18	19	18	19	20	20
PERSONNEL AIDE	763	F	43	16	601.60	17	19	18	16	18	17
LIBRARY ASSOCIATE	1310	F	18	16	597.60	18	19	18	17	19	18
ACTIVITIES ASSISTANT	2107	F	16	16	597.60	19	20	19	18	19	18
OCCUPATIONAL THERAPY ASST	2117	F	8	16	597.60	20	21	20	19	20	19
LABORATORY ASST II	5166	F	6	16	597.60	16	17	16	15	17	15
COMPOSITOR	8505	F	9	16	597.60	17	19	18	18	20	19
WORD PROCESSOR III	63	F	16	17	632.80	19	20	19	19	20	20
DATA ENTRY SUPERVISOR I	108	F	8	17	650.40	19	20	19	19	21	20
SYSTEM SUPPORT WORKER III	113	F	7	17	632.80	18	19	19	19	20	19
ACCOUNTING TECHNICIAN I	290	F	25	17	625.60	18	19	18	19	20	19
EDUCATION ASSISTANT	1010	F	4	17	625.60	19	20	19	19	21	19
MEDICAL LAB. TECH.	2205	F	10	17	625.60	19	20	20	19	22	20
RADIOLOGIC TECHNOLOGIST I	2209	F	5	17	625.60	17	19	18	17	20	18
INSTITUTIONAL HOMEMAKER	3077	F	3	17	625.60	20	21	20	21	22	21
RESIDENT TREATMENT TECHNICIAN	3202	F	89	17	625.60	22	23	22	18	19	18
DRUG ABUSE COUNSELOR I	3251	F	1	17	625.60	20	21	20	19	21	20
OFFICES SERVICES SUPR	30	F	72	18	680.00	21	22	21	22	24	23
ACCOUNTING CLERK III	307	F	12	18	661.60	18	20	19	20	21	20
LPN2	2002	F	104	18	654.40	22	23	22	20	21	20
RESPIRATORY THERAPY TECH	2200	F	1	18	654.40	20	21	20	21	23	22
RADIOLOGIC TECHNOLOGIST II	2211	F	4	18	654.40	19	21	20	22	23	22
DENTAL HYGIENIST	2222	F	1	18	680.00	20	21	20	17	19	17
INCOME MAINT WKR I	3090	F	487	18	654.40	19	20	19	18	19	19
CHIEF TELETYPE OPERATOR	4710	F	1	18	680.00	21	22	21	22	22	22
DATA ENTRY SUPERVISOR II	109	F	2	19	708.80	21	22	21	21	22	21
JR. INSURANCE CO. EXAMINER	443	F	2	19	688.80	18	20	19	18	21	19
INSURANCE LICENSING TECH	462	F	3	19	688.80	19	20	19	18	20	19
PERSONNEL TECH	762	F	21	19	689.60	19	20	19	18	20	19
SIGN LANG INTERPRETER	3171	F	3	19	688.80	21	22	21	21	23	22
RESIDENT TREATMENT SUPR 1	3203	F	135	19	708.80	23	24	23	22	24	22
LAUNDRY SUPV. I	7310	F	4	19	708.80	21	22	21	18	19	18
OFFICE SERV. SUPV. II	31	F	16	20	739.20	23	24	23	24	25	24
COMPUTER PROGRAM TRAINEE	150	F	3	20	711.20	17	18	17	19	20	20
ACCOUNTING TECHNICIAN II	292	F	29	20	711.20	19	20	20	22	23	22
ADMINISTRATIVE ASST I	708	F	57	20	711.20	21	22	21	22	23	23
RETIRE BENEFIT SPEC I	831	F	1	20	711.20	19	20	19	21	22	22
LPN3	2003	F	14	20	739.20	24	25	24	23	24	22
SOCIAL WORKER I	3012	F	1	20	714.40	22	23	22	21	23	22
INCOME MAINT WKR II	3091	F	142	20	711.20	20	21	20	20	21	21
RESIDENT TREATMENT SUPR 2	3204	F	30	20	739.20	25	25	25	24	25	24
DAIRY TRADE PRAC. INV.	5186	F	1	20	712.80	20	21	20	22	24	22

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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FOOD PRODUCTION SUPV.	7235	F	25	20	739.20	22	23	22	22	23	22
INFORMATION SPECIALIST I	750	F	5	21	734.40	21	22	21	22	23	23
EDUCATOR I	1015	F	2	21	768.80	24	25	24	26	26	25
PSYCHOLOGY ASSISTANT	3242	F	7	21	768.80	22	23	22	21	22	21
RIGHT OF WAY AIDE III	4107	F	1	21	737.60	18	19	18	21	22	22
MEDICAL RECORDS ADMIN	78	F	5	22	804.00	21	22	21	22	24	23
TREAS INVEST OFF I	685	F	1	22	804.00	21	22	21	23	24	23
MANAGEMENT ANALYST I	733	F	5	22	804.00	21	22	21	23	23	24
PERSONNEL MGMT SPEC I	790	F	4	22	804.00	21	22	21	22	23	22
RETIRE BENEFIT SPEC II	832	F	6	22	771.20	21	22	21	23	23	23
NURSE	2020	F	138	22	804.00	27	27	27	24	25	24
MEDICAL TECHNOLOGIST	2215	F	12	22	804.00	20	21	20	21	22	21
SOCIAL WORKER II	3013	F	469	22	780.00	22	23	23	22	23	23
VOLUNTEER SVCE SPECIALIST	3351	F	2	22	771.20	20	21	20	20	21	21
THERAPEUTIC DIETITIAN	7344	F	14	22	804.00	23	24	24	25	26	25
UTILITY ANALYST I	528	F	7	23	805.60	20	21	20	23	23	24
ADMINISTRATIVE OFFICER I	691	F	22	23	838.40	22	23	22	24	24	24
EDUCATOR II	1016	F	25	23	838.40	24	25	24	26	26	25
VOLUNTEER SERVICE DIR I	3352	F	2	23	813.60	22	23	22	23	23	23
MICROBIOLOGIST I	4422	F	2	23	838.40	20	21	21	22	23	22
DATA PROCESSING SUPERVISOR	132	F	6	24	872.80	22	23	23	24	25	24
NURSE CLINICIAN	2021	F	30	24	872.80	30	30	30	29	29	28
NURSE SUPV I	2023	F	59	24	872.80	28	29	28	29	29	28
NURSING EDUCATOR	2025	F	8	24	872.80	27	27	27	29	29	29
PUBLIC HEALTH DEN HYGIEN	2430	F	2	24	872.80	21	22	21	22	23	23
INCOME MAINT WKR III	3092	F	32	24	844.80	21	22	21	23	23	23
INC MAINT WKR III (SUPV)	3165	F	76	24	872.80	22	23	22	23	24	23
CHILD SUPPORT RECOVERY OFF	3345	F	37	24	850.40	23	24	23	26	27	26
TRANS PLANNER-IN-TRAIN	4045	F	1	24	872.80	20	21	20	22	23	22
INFORMATION SPECIALIST II	751	F	15	25	867.20	24	24	24	27	28	27
ASST RETIRE BENEFIT SUPV	833	F	3	25	907.20	24	25	24	26	27	26
HISTORICAL EDITOR	1335	F	3	25	867.20	26	26	26	28	30	28
SPEECH/LANG PATH I	2135	F	9	25	907.20	23	24	23	25	26	25
AUDIOLOGIST	2138	F	4	25	907.20	24	25	25	26	27	27
CONSULTANT FOR HANDICAPPED	3150	F	2	25	874.40	25	25	25	26	26	26
VOLUNTEER SERVICE DIR II	3353	F	5	25	874.40	22	23	22	23	24	23
DIETITIAN II	7253	F	2	25	907.20	26	26	26	27	28	27
TREAS INVEST OFF II	686	F	1	26	949.60	23	24	23	25	26	25
NURSE SUPV II	2022	F	28	26	949.60	29	30	29	30	30	29
HOMEMAKER SERVICES SUPV II	3084	F	3	26	949.60	26	26	26	28	28	28
WORK EVALUATOR	3260	F	1	26	949.60	26	26	26	25	27	26
OUTDOOR RECREAT PLAN I	4067	F	1	26	912.00	22	23	22	25	25	25
EDUCATOR IV	1018	F	54	27	992.00	26	27	26	28	28	27
OCCUPATIONAL THERAPIST II	2119	F	4	27	992.00	26	26	26	27	27	27
SPEECH/LANG PATH II	2136	F	2	27	992.00	26	27	26	28	28	28
CHILD SUPPORT RECOVERY, SUPR	3346	F	5	27	992.00	24	24	24	26	27	26
MICROBIOLOGIST II	4423	F	1	27	992.00	23	24	24	27	27	26
DIETITIAN III	7254	F	8	27	992.00	28	28	28	29	30	29
INSURANCE PROGRAM SPEC.	453	F	5	28	1005.60	26	26	26	27	28	27
LIBRARIAN III	1320	F	5	28	1040.80	26	27	26	27	29	28
NURSING EDUCATION DIR	2030	F	2	28	1040.80	29	29	29	30	31	30
NURSING SERVICES DIR.	2035	F	5	28	1040.80	33	33	33	32	32	32
PUB. HEALTH NURS. SUPV	2060	F	7	28	1040.80	29	29	29	31	31	31
NURSE CONSULTANT	2065	F	12	28	1040.80	27	27	27	30	29	29
HOSPITAL NURS. CONS	2066	F	12	28	1040.80	30	30	30	31	31	31

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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PHYSICAL THERAPIST II	2131	F	3	28	1040.80	26	27	26	27	27	26
DIETARY CONSULTANT	7258	F	11	28	1040.80	28	28	28	30	30	30
EDUCATION CONSULTANT	1019	F	1	29	1091.20	26	27	26	28	28	28
EDUCATION SUPERVISOR II	1022	F	8	29	1091.20	28	28	28	30	29	29
NURSING STDS REPR.	2045	F	3	29	1091.20	28	28	28	30	30	29
HEALTH FAC. SURVEYOR	4538	F	7	29	1055.20	30	30	30	31	31	31
DIR OF VOTER REGISTRATION	200	F	1	30	1143.20	26	27	26	27	28	28
DIRECTOR OF ELECTIONS	702	F	1	30	1112.00	20	21	20	22	23	23
ASST DIR PUB HEALTH NURS	2070	F	1	30	1143.20	31	31	31	32	32	31
STATE VOLUNTEER PROG DIR	3350	F	1	30	1106.40	27	27	27	28	29	28
DIR OF NURSING	2041	F	5	31	1198.40	36	35	35	33	32	32
PHARMACY CONSULTANT	2228	F	1	32	1220.80	26	26	26	28	28	28
PUBLIC HEALTH NUTRITION DIR	7260	F	1	32	1256.80	32	32	32	32	32	32
DIR OF PUB. HEALTH NURSING	2071	F	1	33	1317.60	37	36	36	35	34	34
STATE DIR EMPLOY RELATIONS	655	F	1	40	1856.00	45	44	45	40	39	39
CENTRAL SUPPLY WORKER I	2085	M	2	12	496.80	14	16	15	14	15	14
MEATCUTTER I	7230	M	1	12	508.00	15	17	16	9	11	10
STOREKEEPER I	235	M	15	13	528.00	15	17	15	12	13	12
YOUTH SERVICES WORKER I	3045	M	31	13	520.80	18	19	18	15	16	15
SECURITY GUARD I	7110	M	27	13	525.60	15	17	16	11	13	12
MAINT. WORKER I	8005	M	26	13	528.00	15	16	15	10	10	10
AUTO SERVICE WORKER	8365	M	4	13	528.00	15	16	15	9	11	10
LAW CLERK	638	M	3	14	544.80	18	19	18	19	20	20
TRADES HELPER	8015	M	33	14	549.60	15	17	15	13	14	13
DRIVER	8205	M	48	14	549.60	17	18	17	12	13	12
WAREHOUSE OPERATIONS WORKER	252	M	31	15	572.80	17	18	18	13	13	13
ENGINEERING AIDE I	4305	M	56	15	570.40	15	17	16	12	13	12
MATERIALS INSPECTOR I	4340	M	11	15	570.40	16	17	16	14	15	14
GEOLOGICAL AIDE	4400	M	8	15	570.40	16	18	17	11	12	11
PARK ATTENDANT	5205	M	52	15	571.20	18	19	18	15	16	15
CONSERVATION WORKER	5301	M	48	15	572.80	16	17	16	13	14	13
MAINT. WORKER II	8006	M	33	15	572.80	16	17	16	13	14	13
TOLL COLLECTOR I	8101	M	20	15	571.20	14	16	15	10	12	11
EQUIPMENT OPERATOR I	8110	M	761	15	572.80	17	19	18	14	14	14
AUTO MECHANIC HELPER	8370	M	25	15	572.80	19	20	19	17	18	17
POWER PLANT ENGR. I	8410	M	2	15	572.80	16	18	17	16	16	16
MILITARY GRAVES REG. II	72	M	1	16	601.60	18	20	19	18	20	19
ASST LIQUOR STORE MGR I	222	M	12	16	597.60	20	21	20	19	20	19
STOREKEEPER II	236	M	30	16	597.60	17	19	18	15	17	15
SOIL CONSERVATION AIDE	5465	M	17	16	597.60	16	18	17	13	15	14
SECURITY GUARD II	7111	M	2	16	598.40	17	18	17	14	16	14
MILITARY SECURITY GUARD	7112	M	33	16	598.40	17	18	17	16	18	16
FURNITURE UPHOLSTERER	8039	M	2	16	597.60	17	18	17	14	15	14
PAINTER I	8043	M	24	16	597.60	16	18	17	15	15	14
REST AREA ATTENDENT	8105	M	48	16	597.60	18	19	18	11	12	11
PARTS WORKER	8140	M	16	16	597.60	16	17	16	15	16	15
POWER PLANT ENGR. II	8415	M	35	16	597.60	18	19	19	19	18	18
ADMINISTRATIVE INTERN	705	M	1	17	632.80	17	18	17	17	18	18
YOUTH SERVICES WORKER III	3047	M	5	17	625.60	21	22	21	20	21	20
NURSERY WORKER II	5006	M	2	17	625.60	19	20	19	17	17	16
MASON	8042	M	4	17	625.60	19	20	20	18	18	17
EQUIPMENT OPERATOR II	8111	M	273	17	625.60	19	20	19	15	16	15
VEHICLE DISPATCHER	8215	M	1	17	625.60	18	19	18	17	19	18
HEATING PLANT MECHANIC	8315	M	4	17	625.60	19	20	20	21	20	20
ASST LIQUOR STORE MGR II	223	M	18	18	650.40	21	22	21	20	21	20

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HIGHWAY ENGINEER TRAINEE	4203	M	19	18	661.60	19	21	20	21	22	21
ENGINEERING AIDE II	4306	M	140	18	654.40	17	18	17	15	15	15
ASST SOILS PARTY CHIEF	4308	M	2	18	654.40	20	21	21	19	19	18
MATERIALS INSPECTOR II	4341	M	35	18	654.40	16	18	17	15	16	15
FARM LEADER	5015	M	4	18	650.40	20	21	20	17	17	16
FISHERIES TECHNICIAN	5303	M	30	18	654.40	18	19	18	17	17	17
WILDLIFE TECHNICIAN	5331	M	25	18	654.40	19	20	19	18	18	17
FORESTRY LEADER I	5410	M	10	18	650.40	19	20	19	18	18	17
MAINTENANCE REPAIRER	8016	M	72	18	650.40	18	19	18	17	17	17
CARPENTER I	8040	M	29	18	650.40	19	20	19	18	18	18
PLUMBER I	8045	M	13	18	650.40	18	19	19	18	18	18
TOLL COLLECTOR II	8102	M	2	18	680.00	16	18	17	14	16	14
EQUIPMENT OPERATOR III	8113	M	136	18	650.40	20	21	20	18	17	17
TRANSPORT DRIVER	8210	M	27	18	650.40	18	20	19	15	16	15
HEAVY EQUIPMENT OPERATOR	8230	M	4	18	650.40	18	20	19	19	18	18
MACHINIST	8305	M	2	18	650.40	21	22	21	21	21	20
WELDER	8310	M	4	18	650.40	20	21	20	18	19	17
ELECTRICIAN I	8325	M	16	18	650.40	19	20	19	20	19	19
SILK SCREEN FABRICATOR	8347	M	1	18	650.40	17	19	18	17	18	17
AUTOMOTIVE BODY REPAIRER	8355	M	1	18	650.40	18	19	18	18	18	18
AUTOMOTIVE ELECTRICIAN	8360	M	1	18	650.40	19	20	19	20	20	19
AUTOMOTIVE MECHANIC	8375	M	166	18	650.40	20	21	20	21	21	21
WATER & DISPOSAL PLT OP II	8406	M	5	18	650.40	18	19	19	19	19	18
POWER PLANT ENGR. III	8416	M	27	18	650.40	19	20	20	21	20	20
LOCKSMITH	8635	M	2	18	650.40	18	19	19	19	20	19
OFFICE MACHINE REPAIRER I	8675	M	2	18	650.40	17	18	17	17	18	17
STOREKEEPER III	237	M	15	19	681.60	19	20	19	16	19	17
WAREHOUSE LEADER	250	M	5	19	708.80	20	21	20	18	19	18
GEOLOGICAL TECHNICIAN	4401	M	1	19	688.80	18	19	18	17	18	17
PARK RANGER I	5210	M	7	19	708.80	21	22	21	19	20	19
MAINTENANCE LEADER	8010	M	8	19	681.60	17	18	17	14	15	14
MAINT REPAIRS LEADER	8020	M	20	19	681.60	19	20	20	20	20	19
PAINTER II	8044	M	7	19	681.60	19	20	19	17	18	17
ASPHALT PAVING MACH. OPER.	8112	M	2	19	681.60	19	21	20	20	20	19
BRIDGE INSP I	8135	M	6	19	688.80	22	23	23	22	21	21
PHOT PROC II	8512	M	1	19	688.80	17	19	18	17	18	17
REVENUE EXAMINER I	350	M	5	20	709.60	20	21	20	20	22	21
YOUTH SERVICES SUPERVISOR	3050	M	1	20	739.20	23	23	23	22	24	22
ENG.OFFICE ASST. I	4380	M	27	20	711.20	19	20	19	21	22	21
TRAFFIC SIGNAL TECH. I	4750	M	3	20	711.20	19	21	20	18	18	18
WEIGHTS AND MEASURES INS.	5101	M	17	20	712.80	20	21	20	21	22	21
FOOD AND SANITATION INSP.	5102	M	29	20	712.80	20	21	20	21	22	21
LIVESTOCK INSPECTOR	5117	M	13	20	712.80	21	22	21	21	21	21
MEAT INSPECTOR	5126	M	35	20	712.80	21	22	21	21	21	21
LIVESTOCK MKTG.SPEC.	5132	M	2	20	712.80	21	22	21	22	23	22
AGRIC. PRODUCTS INSPEC.	5144	M	16	20	712.80	20	21	21	21	22	21
FORESTRY LEADER II	5411	M	4	20	711.20	20	21	20	19	20	19
CORRECTIONS FOOD SVCE COOR	7237	M	25	20	711.20	23	24	24	21	22	21
CANTEEN OPERATOR II	7246	M	1	20	711.20	20	21	20	18	19	18
CONTROL CENTER OPERATOR	8000	M	4	20	711.20	19	20	19	22	22	22
PARTS LEADER	8141	M	3	20	711.20	18	20	19	18	19	18
VEHICLE FLEET SUPV	8220	M	5	20	739.20	19	20	19	21	21	21
LABORATORY EQUIP. TECH.	8340	M	1	20	711.20	20	21	20	21	21	21
PLANNING AIDE III	4007	M	19	21	737.60	20	21	20	22	23	22
SOILS PARTY CHIEF	4310	M	7	21	737.60	23	24	23	21	22	21

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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CONSTRUCTION TECH. I	4320	M	159	21	737.60	22	22	22	22	22	22
ASST SURVEY PARTY CHIEF	4325	M	14	21	737.60	22	23	23	22	23	22
MATERIALS INSPECTOR III	4342	M	39	21	737.60	21	22	22	20	21	20
DAIRY PRODUCTS INSP.	5112	M	8	21	744.80	22	22	22	22	23	22
PARK RANGER II	5215	M	20	21	768.80	22	23	22	21	22	21
CONSERVATION OFFICER	5355	M	74	21	732.00	22	23	22	21	21	21
MOTOR VEHICLE OFFICER I	6360	M	61	21	744.80	22	23	22	21	22	21
CORRECTIONAL OFFICER	6406	M	773	21	744.80	20	21	20	16	17	16
AIRPORT FIREFIGHTER	7130	M	17	21	744.80	20	21	21	21	22	21
LAUNDRY SUPV. II	7311	M	2	21	768.80	24	25	24	23	24	23
CORR BLDG SVCS COORD	7313	M	6	21	735.20	22	23	22	19	20	19
FACILITIES MAINT COORD	8012	M	2	21	735.20	21	22	21	23	23	22
CARPENTER II	8041	M	11	21	735.20	20	21	21	19	19	19
PLUMBER II	8046	M	5	21	735.20	20	21	20	20	20	20
AIR CONDITIONING MECH	8323	M	6	21	735.20	19	21	20	22	22	21
ELECTRICIAN II	8326	M	11	21	735.20	22	23	22	23	23	23
AUTO MECHANIC LEADER	8380	M	7	21	735.20	21	22	22	23	23	22
GEOLOGY RESEARCH DRILLER	8650	M	1	21	737.60	22	23	22	20	20	19
ELECTRONICS TECH	8672	M	4	21	735.20	21	22	21	22	23	22
OFFICE MACHINE REPAIRER II	8677	M	1	21	735.20	20	21	20	20	21	20
REVENUE AGENT II	355	M	43	22	771.20	22	23	22	24	25	24
REFUGEE SPECIALIST I	895	M	8	22	771.20	20	21	20	21	22	22
MUSEUM TECHNICIAN	1330	M	4	22	771.20	24	25	24	24	25	25
DESIGN TECHNICIAN III	4357	M	46	22	771.20	20	21	20	22	23	22
COMMUNICATIONS TECH. I	4735	M	1	22	771.20	19	21	20	22	23	22
FOOD SANITATION SURVEY OFF	5103	M	3	22	777.60	23	23	23	22	23	22
METROLOGIST	5104	M	1	22	771.20	22	23	23	24	25	24
SENIOR WEIGHTS & MEASURES INS	5105	M	1	22	777.60	22	23	22	22	23	22
SENIOR MEAT INSPECTOR	5127	M	3	22	777.60	23	23	23	22	23	22
FISHERIES BIOLOGIST I	5312	M	4	22	804.00	21	22	21	21	22	21
WILDLIFE BIOLOGIST I	5332	M	5	22	804.00	21	22	21	21	22	21
FORESTER I	5415	M	1	22	804.00	21	22	21	21	22	21
STATE INDUSTRIES TECHICIAN	6465	M	21	22	777.60	23	24	24	19	21	19
COMM CORR SERVICES WKR I	6502	M	42	22	780.00	21	22	21	20	21	21
MAINT REPAIRS SUPV	8021	M	19	22	804.00	24	25	24	26	26	25
BRIDGE INSP II	8136	M	9	22	771.20	22	23	23	22	21	21
SCALE MECHANIC	8320	M	1	22	771.20	20	21	20	20	20	20
POWER PLANT ENGR IV	8420	M	9	22	768.80	21	22	21	21	21	20
CHF POWER PLANT ENG	8421	M	8	22	804.00	24	25	24	23	24	23
PHOTOGRAPHER	8516	M	4	22	771.20	17	18	17	17	18	17
AIRCRAFT MECHANIC	8639	M	1	22	768.80	22	23	23	25	24	23
FIELD SAFETY TECHNICIAN	660	M	17	23	812.00	23	24	23	25	25	25
INVESTIGATOR I	695	M	4	23	805.60	22	22	22	21	23	22
CERTIFIED VOCATIONAL INSTR	1037	M	13	23	808.00	24	24	24	24	24	23
RIGHT OF WAY AGENT I	4110	M	1	23	805.60	20	21	21	21	23	22
PHOTOGRAMMETRIST I	4335	M	3	23	808.00	19	21	20	21	23	22
MATERIALS FABRICATION INSPEC I	4343	M	6	23	808.00	23	23	23	22	23	22
CHEMIST I	4415	M	4	23	838.40	20	21	21	22	23	22
ENVIRONMENTAL SPEC I	4517	M	1	23	838.40	23	23	23	23	24	23
TRAFFIC SIGNAL TECH. II	4752	M	1	23	838.40	23	24	23	22	23	22
CORRECTIONS FARM MANAGER	5032	M	2	23	802.40	24	25	24	24	24	23
PESTICIDE INVESTIGATOR	5145	M	5	23	812.00	26	26	26	26	27	26
PARK RANGER III	5217	M	26	23	838.40	22	23	23	22	23	22
MOTOR VEHICLE OFFICER II	6361	M	15	23	812.00	24	24	24	23	23	22
SR. CORRECTIONAL OFFICER	6409	M	67	23	812.00	22	23	23	19	20	19

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CORR. COUNSELOR I	6417	M	14	23	813.60	24	24	24	23	24	23
STATE INDUST SALES REPR	6460	M	5	23	808.00	21	22	21	23	23	23
CHIEF OF SECURITY	7115	M	1	23	838.40	22	23	22	24	24	24
HIGHWAY MAINTENANCE SUPERVISOR 1	8115	M	21	23	838.40	25	25	25	24	25	23
PARTS MANAGER	8142	M	2	23	838.40	23	24	23	24	25	24
LIQUOR STORE MANAGER III	227	M	18	24	872.80	22	23	23	24	25	24
WAREHOUSE SUPERVISOR	256	M	6	24	872.80	22	23	22	22	23	22
GRAIN DEALER & WHSE EXAM	482	M	19	24	849.60	23	23	23	23	22	22
UTILITIES REGULATION INSP	556	M	6	24	844.80	21	22	21	22	22	22
EMPLOY LIAB COLL OFFCR	888	M	5	24	842.40	22	23	22	24	24	24
REFUGEE SPECIALIST II	896	M	9	24	844.80	21	22	21	22	23	23
CHAPLAIN	3310	M	11	24	850.40	27	28	27	26	27	26
AFF ACTION COMP OFF I	3313	M	3	24	872.80	23	23	23	23	23	23
PLANNING AIDE IV	4008	M	8	24	844.80	21	22	22	23	24	23
RIGHT OF WAY AIDE IV	4108	M	14	24	844.80	21	22	21	25	24	24
SOILS PARTY SUPERVISOR	4312	M	3	24	872.80	25	25	25	26	27	26
SURVEY PARTY CHIEF	4326	M	6	24	872.80	25	25	25	25	25	24
ARCHITECTURAL TECH I	4363	M	1	24	844.80	17	19	18	21	22	21
ENG.OFFICE ASST. II	4381	M	7	24	844.80	19	20	19	21	22	21
RADIO STATION SUPV.	4725	M	5	24	872.80	22	23	23	24	24	24
GRAIN MARKET REPORTER	5135	M	1	24	842.40	23	24	23	25	25	25
ENTOMOLOGIST	5162	M	4	24	872.80	25	25	25	27	27	26
TRAINING FACILITIES SUPV	6075	M	1	24	849.60	18	19	18	20	21	20
MOTOR VEHICLE INVEST	6340	M	24	24	849.60	24	25	24	23	24	23
COMM CORR SERVICES WKR II	6503	M	27	24	850.40	22	23	23	23	24	23
BLDG SERV SUPV II	7027	M	2	24	872.80	22	23	23	22	23	22
BLDG. & GROUNDS SUPV.	8025	M	6	24	872.80	23	24	23	24	25	24
GROUNDS MAINT SUPER	8026	M	1	24	872.80	23	24	23	23	23	22
CONSTRUCTION MAINT SUPER	8027	M	1	24	872.80	25	26	25	26	27	26
ELECTRICAL MAIN SUPER	8028	M	2	24	872.80	27	27	27	28	28	27
REPRODUCTION SUPV	8535	M	3	24	872.80	21	22	22	23	24	23
REVENUE AGENT III	356	M	15	25	907.20	26	26	26	27	28	27
BANK EXAMINER II	405	M	15	25	867.20	24	24	24	25	27	25
TRACK CAR OPERATOR	683	M	2	25	873.60	21	22	21	19	21	19
MANPOWER SPECIALIST IV	809	M	5	25	907.20	23	23	23	24	25	24
MANPOWER RESEARCH ECON. II	871	M	13	25	867.20	23	24	24	25	27	26
VOCATIONAL INSTRUCTOR SUPV.	1040	M	2	25	907.20	22	23	22	23	24	23
ACTIVITIES SPEC. II	2111	M	13	25	907.20	24	25	24	25	25	25
ACTIVITIES SPEC II (SUPV)	2112	M	13	25	907.20	27	27	27	27	27	27
PHYSICAL THERAPIST I	2130	M	1	25	907.20	24	25	24	25	24	24
ROADSIDE DEVELOP SPEC I	4235	M	1	25	907.20	22	23	22	23	24	23
CONSTRUCTION TECH. II	4321	M	87	25	872.00	24	24	24	24	24	23
MATERIALS INSPECTOR IV	4345	M	27	25	872.00	23	24	24	24	24	23
MATERIALS TECH. SUPR. 1	4352	M	2	25	907.20	29	29	29	29	29	28
DESIGN TECHNICIAN IV	4358	M	27	25	872.00	23	23	23	25	26	25
MAINT. OPNS. ASST.	4385	M	24	25	907.20	25	26	25	25	26	25
PUBLIC HLTH SANITARIAN II	4511	M	3	25	907.20	25	26	25	26	27	26
COMMUNICATIONS TOWER WKR	4730	M	1	25	863.20	23	24	23	19	20	19
COMMUNICATIONS TECH. II	4736	M	25	25	872.00	23	24	23	25	26	24
AGRICULTURE MKTG. SPEC.	5134	M	1	25	867.20	26	26	26	27	29	28
FISHERIES BIOLOGIST II	5313	M	23	25	907.20	23	24	24	24	25	24
WILDLIFE BIOLOGIST II	5333	M	23	25	907.20	23	24	24	24	25	24
FORESTER II	5416	M	14	25	907.20	23	24	24	24	25	24
CORR CONSELOR II	6418	M	44	25	874.40	26	26	26	26	27	26
JAIL INSPECTOR	6443	M	3	25	873.60	22	23	22	25	25	25

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PAROLE BD LIAISON OFFICER	6453	M	2	25	874.40	24	25	24	25	26	25
SENIOR STATE INDUSTRIES TECHNICIAN	6467	M	11	25	873.60	23	24	24	21	22	20
AIRPORT FIREFIGHTER SUPV.	7131	M	3	25	907.20	25	25	25	26	25	24
BRIDGE INSP III	8137	M	7	25	907.20	26	27	26	26	25	24
DISTRICT MECHANIC	8390	M	10	25	863.20	24	25	24	25	25	25
PURCHASING AGENT II	211	M	7	26	912.00	23	24	23	23	25	24
LIQUOR STORE MANAGER IV	228	M	18	26	949.60	24	25	24	25	26	25
FIELD AUDITOR II	327	M	25	26	912.00	25	25	25	27	28	27
REVENUE AUDITOR II	343	M	75	26	912.00	25	25	25	27	28	27
SMALL LOAN EXAMINER II	436	M	1	26	912.00	21	22	21	25	25	25
INSURANCE & CLAIMS INVEST	452	M	1	26	912.00	22	23	22	24	24	23
UTIL REG ENG I	543	M	6	26	949.60	22	23	23	25	25	25
LABOR SAFETY & HEALTH CONS	666	M	3	26	912.00	22	23	23	24	25	24
ELEVATOR INSPECTOR	675	M	8	26	915.20	24	24	24	25	25	24
TRAINING OFFICER I	764	M	19	26	949.60	23	24	23	27	27	27
EMPLOYER LIABILITY AUD III	883	M	5	26	912.00	25	25	25	27	28	27
COUNTY SOC SVC DIR I	3030	M	1	26	949.60	29	29	29	29	29	29
INCOME MAINT WKR IV	3093	M	1	26	916.80	24	25	24	27	27	26
INC MAINT WKR IV (SUPV)	3166	M	9	26	949.60	25	25	25	25	26	25
PSYCHOLOGIST I	3245	M	4	26	949.60	26	26	26	25	26	25
RIGHT OF WAY AGENT II	4111	M	33	26	912.00	24	24	24	26	26	26
HIGHWAY ENG-IN-TRAINING	4205	M	13	26	949.60	21	22	21	22	23	22
PHOTOGRAMMETRIST II	4336	M	1	26	949.60	24	24	24	27	29	27
MATERIALS FABRICATION INSPEC.2	4344	M	7	26	916.80	25	26	25	25	26	25
ARCHITECTURAL TECH II	4364	M	3	26	916.80	21	22	21	24	25	25
ENVIRONMENTAL SPEC II	4518	M	37	26	949.60	26	27	26	28	29	28
CHIEF COMM. TECH.	4740	M	2	26	949.60	23	24	23	24	25	24
PARKS SUPERVISOR	5220	M	6	26	949.60	27	27	27	27	28	27
WILDLIFE BIOLOGIST III	5334	M	8	26	949.60	27	27	27	27	28	27
CONSERVATION ENFORCE SUPV	5360	M	6	26	949.60	26	26	26	26	27	26
DRIVERS LIC HEARING OFFCR	6302	M	14	26	916.80	24	24	24	26	27	26
MOTOR VEHICLE OFFICER III	6362	M	8	26	949.60	27	28	28	26	27	26
CORRECTIONAL SUPV I	6410	M	61	26	949.60	26	26	26	24	24	23
MECHANICAL MAINT SUPER	8029	M	1	26	949.60	26	27	26	27	27	26
HIGHWAY MAINTENANCE SUPERVISOR 2	8116	M	120	26	949.60	26	26	26	26	26	25
PLANT OPERATIONS MGR I	8425	M	11	26	949.60	24	25	24	25	26	25
BOILER INSP	8430	M	3	26	915.20	23	24	23	24	24	23
COMPUTER OPER MGR I	147	M	4	27	992.00	22	23	22	24	25	24
CREDIT UNION EXAMINER II	421	M	8	27	957.60	23	24	23	26	26	26
WRHS/GRAIN DEALER EXAMINER SUPR	484	M	3	27	992.00	26	26	26	26	26	25
EMERG. SERV. OFFICER II	613	M	1	27	957.60	25	26	25	24	25	25
EMPLOYMENT SERVICE MANAGER	815	M	31	27	992.00	26	26	26	27	28	27
CLAIMS MANAGER	844	M	10	27	992.00	26	26	26	27	28	27
VOCATIONAL SCH PRINCIPAL	1045	M	1	27	992.00	26	26	26	26	27	26
SENIOR HIGHWAY ENG/TRAIN	4207	M	13	27	992.00	24	25	24	25	27	25
LAND SURVEYOR I	4240	M	7	27	992.00	25	26	25	26	26	26
CONSTRUCTION TECH. III	4322	M	40	27	992.00	27	27	27	29	29	29
DISTRICT CONSTRUCTION TECH	4323	M	17	27	960.80	24	25	24	27	28	27
CHEMIST II	4416	M	17	27	992.00	23	24	24	27	27	26
PLANT PATHOLOGIST	5160	M	1	27	992.00	27	27	27	28	28	27
FORESTER III	5417	M	5	27	992.00	27	27	27	27	28	27
STATE INDUSTRIES SUPERVISOR	6468	M	8	27	992.00	27	27	27	25	25	24
COMM CORR SERVICES SUPV	6505	M	10	27	992.00	27	27	27	28	28	27
RESTORATION PAINTER	8099	M	2	27	948.80	22	23	22	22	23	21
CHF BRIDGE INSP	8138	M	1	27	992.00	28	28	28	28	28	27

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AUTO SHOP SUPERVISOR	8385	M	2	27	992.00	26	26	26	27	27	26
REVENUE AUDITOR III	344	M	34	28	1005.60	26	27	26	28	30	29
REVENUE SUPV. I	376	M	3	28	1040.80	26	26	26	27	28	27
INSURANCE RATE ANALYST I	457	M	1	28	1005.60	24	24	24	25	27	26
HEARINGS COMPL OFFCR I	640	M	14	28	1005.60	29	29	29	28	29	29
INVESTIGATOR III	697	M	3	28	1005.60	27	27	27	29	29	29
EMPLOYER LIABILITY AUD IV	884	M	3	28	1040.80	27	27	27	28	29	28
EDUCATION SUPERVISOR I	1021	M	2	28	1040.80	28	28	28	30	29	29
STATE ARCHIVIST	1328	M	1	28	1040.80	28	29	28	30	31	30
DISEASE PREV SPEC II	2426	M	1	28	1040.80	23	24	24	24	25	25
CHAPLAIN EDUCATOR	3311	M	4	28	1040.80	28	28	28	27	28	27
OUTDOOR RECREAT PLAN II	4068	M	4	28	1005.60	25	25	25	27	28	27
ROADSIDE DEVELOP SPEC II	4236	M	2	28	1040.80	24	25	24	25	26	25
SURVEYS SUPV.	4330	M	1	28	1040.80	27	27	27	29	29	29
MATERIALS TECH.SUPR.2	4353	M	10	28	1040.80	27	27	27	27	28	27
DESIGN TECHNICIAN 5	4361	M	24	28	1040.80	27	27	27	28	29	28
GEOLOGIST II	4406	M	5	28	1040.80	24	25	24	27	28	27
MILK SANITATION RATING OFF	4515	M	2	28	1040.80	25	26	25	26	27	26
ELECTRONIC ENGINEER TECH	4742	M	4	28	1010.40	23	24	23	27	27	26
CORRECTIONAL SUPV II	6411	M	30	28	1040.80	27	27	27	25	26	24
CONTROL CENTER SUPERVISOR	8001	M	1	28	1040.80	24	25	24	27	27	27
HIGHWAY MAINTENANCE SUPERVISOR 3	8117	M	12	28	1040.80	27	27	27	26	27	25
PLANT OPERATIONS MGR II	8426	M	8	28	1040.80	26	26	26	27	28	27
SYSTEMS PROGRAMMER	166	M	6	29	1091.20	27	27	27	29	29	29
DATA PROCESSING SPEC I	187	M	4	29	1055.20	24	25	24	27	28	27
ASST DIR OF VOTER REGIST	201	M	1	29	1091.20	25	25	25	26	27	27
PURCHASING AGENT III	212	M	4	29	1055.20	28	28	28	29	30	29
FIELD AUDITOR III	328	M	2	29	1091.20	27	27	27	29	29	29
REVENUE EXAMINER 4	358	M	6	29	1055.20	28	28	28	30	31	30
TECHNICAL TAX SPECIALIST 1	360	M	2	29	1091.20	25	25	25	28	29	28
INSURANCE POLICY ANALYST	455	M	3	29	1055.20	29	29	29	29	30	29
SECURITIES EXAMINER	470	M	5	29	1055.20	30	30	30	31	31	31
SECURITIES DEALER EXAM.	472	M	2	29	1055.20	30	30	30	31	31	31
SAFETY INSPECTION SUPV	676	M	3	29	1091.20	28	28	28	29	29	28
INVESTIGATOR IV	698	M	5	29	1091.20	28	28	28	30	31	30
INFORMATION SPECIALIST III	754	M	8	29	1091.20	29	29	29	31	31	30
PUBLIC SERV EXEC I	781	M	76	29	1091.20	28	28	28	30	31	30
JOB SERVICE SPECIALIST	824	M	6	29	1055.20	26	27	26	28	29	28
SCHOLARSHIP & LOAN SUPV	1105	M	2	29	1091.20	25	26	26	27	27	27
DIRECTOR OF ACTIVITIES	2115	M	6	29	1091.20	29	29	29	31	31	31
HEALTH PROFESSIONS INVESTIGATOR	2230	M	12	29	1091.20	26	26	26	28	28	28
ADJUTANT, IOWA VETERANS HOMES	3320	M	1	29	1091.20	29	29	29	31	31	30
TRANSPORTATION PLANNER I	4050	M	6	29	1091.20	24	25	24	28	28	28
RIGHT OF WAY AGENT III	4112	M	17	29	1091.20	24	24	24	26	27	26
HIGHWAY ENGINEER I	4210	M	14	29	1091.20	26	26	26	29	29	29
CHIEF ARCH. TECH.	4365	M	1	29	1091.20	25	26	25	27	28	27
ENV. ENG. II	4521	M	24	29	1091.20	26	26	26	27	28	27
FISHERIES SUPERVISOR	5317	M	3	29	1091.20	30	30	30	30	30	29
WILDLIFE SUPERVISOR	5337	M	2	29	1091.20	30	30	30	30	31	30
ASSISTANT STATE FORESTER	5420	M	1	29	1091.20	30	30	30	30	31	30
CRIMINALIST II	6021	M	1	29	1091.20	27	27	27	28	28	27
CORRECTIONAL SECURITY MGR	6415	M	7	29	1091.20	28	28	28	26	27	25
CORRECTIONAL TREATMENT MGR	6420	M	4	29	1091.20	29	29	29	29	29	29
AIRCRAFT PILOT	8640	M	3	29	1059.20	24	25	25	26	27	25
ACCOUNTANT III	312	M	16	30	1143.20	26	27	27	30	30	30

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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REVENUE AUDITOR IV	347	M	15	30	1143.20	30	30	30	32	32	31
PROPERTY APPRAISER III	369	M	14	30	1108.80	29	29	29	30	31	30
BANK EXAMINER III	406	M	19	30	1108.80	26	26	26	27	29	28
CREDIT UNION EXAMINER III	422	M	4	30	1108.80	26	26	26	28	28	28
INSURANCE RATE ANALYST II	458	M	1	30	1108.80	27	27	27	28	29	28
SENIOR UTILITY ANALYST	531	M	11	30	1108.80	26	26	26	28	29	28
WIN PROGRAM COORDINATOR	825	M	1	30	1108.80	28	28	28	29	30	29
EDUCATION PRINCIPAL	1025	M	4	30	1143.20	32	32	32	33	32	32
SOCIAL WORKER VI	3019	M	12	30	1106.40	28	28	28	30	31	30
INCOME MAINT WKR VI	3095	M	1	30	1112.00	27	27	27	28	28	28
TREAT SERVICES DIR	3235	M	18	30	1143.20	29	29	29	29	30	29
RIGHT OF WAY AGENT IV	4113	M	2	30	1143.20	28	29	28	29	29	29
LAND SURVEYOR II	4241	M	6	30	1143.20	27	27	27	29	30	29
ENVIRONMENTAL SPEC III	4519	M	18	30	1143.20	28	29	28	30	31	30
MED. FAC. CONSULTANT	4545	M	5	30	1108.80	30	30	30	31	31	30
AERO. STDS. OFFICER	4605	M	2	30	1112.00	29	29	29	29	30	29
COMMUNICATIONS ENGINEER	4775	M	1	30	1143.20	28	28	28	30	30	30
LAW ENF. INSTRUCTOR	6068	M	4	30	1143.20	25	25	25	28	28	28
CORRECTIONAL SERVICES MANAGER	6507	M	8	30	1143.20	29	29	29	30	30	29
SENIOR SYSTEMS ANALYST	157	M	16	31	1163.20	28	28	28	31	31	31
PURCHASING AGENT IV	215	M	1	31	1198.40	32	32	32	34	33	33
UTIL REG ENG II	545	M	4	31	1198.40	25	26	26	29	29	29
TRANSPORTATION PLANNER II	4051	M	12	31	1198.40	28	28	28	31	31	30
OUTDOOR RECREAT PLAN III	4069	M	2	31	1198.40	30	30	30	32	32	31
RIGHT OF WAY AGENT V	4114	M	5	31	1198.40	31	31	31	31	31	31
HIGHWAY ENGINEER II (SUPV)	4209	M	46	31	1198.40	32	31	32	32	32	32
HIGHWAY ENGINEER II	4211	M	34	31	1198.40	30	30	30	32	32	31
ROADSIDE DEVELOP SPEC III	4237	M	1	31	1198.40	29	29	29	30	30	30
FACILITIES ENGINEER	4256	M	8	31	1198.40	29	29	29	31	32	31
GEOLOGIST 3	4407	M	11	31	1198.40	28	28	28	30	30	29
COMMUNICATIONS MANAGER	4747	M	2	31	1198.40	28	28	28	30	30	30
NAT RESOURCE ENG III	5447	M	4	31	1198.40	27	27	27	29	30	29
ASST DIR-MOTOR VEH ENFORCE	6363	M	2	31	1198.40	27	28	27	28	29	28
CORR. SECURITY DIR.	6416	M	2	31	1198.40	35	34	34	31	31	30
CORR. TREATMENT DIR.	6421	M	2	31	1198.40	35	34	35	33	33	33
PLANT OPER MGR III	8427	M	3	31	1198.40	31	31	31	30	30	29
DATA PROCESSING SPEC II	188	M	6	32	1220.80	27	27	27	30	30	29
REVENUE AUDITOR V	348	M	3	32	1256.80	32	32	32	32	33	32
TECHNICAL TAX SPECIALIST 2	361	M	2	32	1256.80	30	30	30	32	31	31
PROP/CASUALTY INS DIV DIR	467	M	1	32	1256.80	28	28	28	29	30	29
TRACK INSPECTOR	684	M	4	32	1214.40	24	24	24	25	25	24
BUDGET ANALYST IV	725	M	9	32	1256.80	29	29	29	32	32	31
PUBLIC SERV EXEC II	782	M	93	32	1256.80	32	32	32	32	32	32
EDUCATION ADMIN	1027	M	2	32	1256.80	32	32	32	32	32	32
PHARMACIST SUPR.	2232	M	1	32	1256.80	29	29	29	29	30	29
SOCIAL WORK ADMIN I	3037	M	9	32	1256.80	33	32	33	33	33	32
TREATMENT PROGRAM ADMIN	3233	M	10	32	1256.80	34	33	34	33	33	33
PSYCHOLOGIST III	3248	M	8	32	1256.80	31	31	31	31	31	30
VETERINARIAN	5138	M	11	32	1256.80	33	33	33	32	32	32
SUPERVISORY VETERINARIAN	5139	M	5	32	1256.80	34	34	34	33	33	33
PARKS SUPERINTENDENT	5230	M	1	32	1256.80	32	32	32	32	32	32
FISHERIES SUPERINTENDENT	5319	M	1	32	1256.80	33	33	33	32	33	32
WILDLIFE SUPERINTENDENT	5339	M	1	32	1256.80	33	33	33	32	33	32
CONSERVATION ENFORCE SUPT	5365	M	1	32	1256.80	31	31	31	31	31	30
STATE FORESTER	5421	M	1	32	1256.80	32	32	32	32	33	32

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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STATE WATERS SUPT	5435	M	1	32	1256.80	25	25	25	27	28	27
CRIMINALIST III	6023	M	14	32	1256.80	30	30	30	31	31	31
LAW ENF ACAD TRAIN COORD	6069	M	1	32	1256.80	30	30	30	32	32	31
DATA PROCESSING MGR	161	M	20	33	1317.60	30	30	30	32	32	31
STATE PAYROLL SUPERVISOR	322	M	1	33	1317.60	29	29	29	29	30	29
BANK EXAMINER 4	408	M	9	33	1317.60	29	29	29	30	32	30
SMALL LOAN SUPERVISOR	441	M	1	33	1317.60	30	30	30	32	32	31
INSURANCE CO. EXAMINER III	446	M	12	33	1317.60	30	30	30	31	32	31
UTILITY SPECIALIST	532	M	9	33	1317.60	27	28	28	30	30	30
MANAGEMENT ANALYST IV	737	M	2	33	1317.60	30	30	30	32	32	31
TRANSPORTATION PLANNER III	4052	M	13	33	1317.60	28	28	28	30	30	30
HIGHWAY ENGINEER III	4212	M	58	33	1317.60	33	33	33	33	33	32
ENV. ENG. III	4522	M	17	33	1317.60	28	29	28	30	31	30
HEALTH FAC. ENG. CONS.	4529	M	2	33	1317.60	30	30	30	31	31	31
COMM DEVELOPMENT DIR	4777	M	1	33	1317.60	29	29	29	31	31	31
CHIEF COMM. ENGINEER	4778	M	2	33	1317.60	30	30	30	33	32	32
ASST. LAW ENF. ACAD. DIR.	6070	M	1	33	1317.60	32	31	31	32	33	32
LEGAL INSTRUCTOR	6077	M	1	33	1317.60	26	27	26	28	29	29
CORR. DEPUTY SUPT.	6425	M	5	33	1317.60	36	36	36	34	34	33
CORR. EVAL. PROGRAM DIR.	6445	M	1	33	1317.60	32	31	32	32	32	32
DATA PROCESS ADM I	191	M	7	34	1383.20	33	32	32	33	33	32
ACCOUNTANT IV	315	M	1	34	1383.20	31	31	31	32	32	31
TECHNICAL TAX SPECIALIST 3	362	M	3	34	1383.20	34	34	34	34	34	33
PROPERTY APPRAISER IV	370	M	1	34	1383.20	33	33	33	33	33	32
CREDIT UNION EXAMINATION SUPERVISOR	430	M	1	34	1383.20	37	36	36	35	35	34
LIFE HEALTH INSUR DIV DIR	469	M	1	34	1383.20	28	28	28	29	30	29
UTIL REG ENG III	546	M	2	34	1383.20	31	31	31	32	32	31
UTIL REG ENG III (SUPV)	547	M	3	34	1383.20	31	31	31	32	32	31
DEPUTY INDUSTRIAL COMM	639	M	7	34	1348.00	32	32	32	33	33	33
HEARINGS COMPLIANCE OFFICER III	642	M	4	34	1383.20	36	35	36	35	35	35
LAW LIBRARIAN	1323	M	1	34	1383.20	31	31	31	32	32	32
CHIEF HEALTH PROFESSION INVESTIGATO	2235	M	1	34	1383.20	30	30	30	31	32	31
PSYCHOLOGIST IV	3249	M	6	34	1383.20	35	35	35	34	34	34
GEOLOGIST 4	4410	M	6	34	1383.20	35	34	34	34	34	34
ENVIRONMENTAL PROG SUPV	4516	M	20	34	1383.20	33	33	33	33	33	32
NAT RESOURCE ENG IV	5448	M	2	34	1383.20	30	30	30	33	32	32
CHIEF INSURANCE CO. EXAM.	450	M	1	35	1453.60	39	38	38	36	36	35
LABOR SAFETY OFFICER	670	M	3	35	1453.60	30	30	30	31	31	30
SR BUDGET & FISCAL ANAL	726	M	1	35	1453.60	32	32	32	33	33	32
PUBLIC SERV EXEC III	784	M	66	35	1453.60	36	35	36	34	34	34
TRANS PLANNER IV	4054	M	1	35	1453.60	33	33	33	34	34	33
HIGHWAY ENGINEER IV	4213	M	8	35	1453.60	36	35	36	34	35	34
HEALTH FAC. OFFICER	4525	M	4	35	1453.60	36	35	35	34	34	33
DATA PROCESS ADM II	193	M	2	36	1524.80	39	38	39	36	36	35
TECHNICAL TAX SPECIALIST 4	363	M	1	36	1524.80	36	36	36	34	34	34
BANK EXAMINER 5	409	M	14	36	1524.80	34	34	34	33	34	33
BANK EXAMINATION ANALYST	415	M	3	36	1486.40	38	37	38	36	35	35
UTILITY ADMINISTRATOR I	535	M	5	36	1524.80	37	36	37	35	35	35
CHIEF UTILITIES REG. ENG.	550	M	1	36	1524.80	30	30	30	31	32	31
PERSONNEL MGMT SPEC V	794	M	1	36	1524.80	39	38	39	36	36	36
DENTIST	2505	M	7	36	1524.80	34	34	34	32	33	32
CRIME LABORATORY ADMIN	6025	M	1	36	1524.80	42	41	42	38	36	37
BANK EXAMINATION, SUPR.	410	M	1	37	1604.00	37	36	37	35	35	35
ASS'T TO SUPERINDENT OF BANKING	417	M	2	37	1604.00	40	39	39	37	36	36
PRIN BUDGET & FISCAL ANAL	728	M	3	37	1604.00	38	37	38	35	35	35

COMPARISON OF ACTUAL AND PRED. PAY GRADES

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PUBLIC SERV EXEC IV	786	M	46	37	1604.00	43	41	42	37	37	37
HIGHWAY ENGINEER VI	4215	M	6	37	1604.00	45	43	44	38	38	37
ATTORNEY III	645	M	7	38	1684.00	41	39	40	37	38	37
REGULATION BOARD COUNSEL	646	M	1	39	1767.20	40	39	39	38	37	37
MENTAL PRGMS DEPUTY ADM	3270	M	1	39	1767.20	49	47	48	39	39	38
DEPUTY CORR PROG ADMIN	6444	M	1	39	1767.20	45	44	45	38	38	37
DATA PROCESS ADM III	196	M	1	40	1856.00	46	44	46	39	38	38
COMMERCE SOLICITOR	658	M	1	40	1856.00	48	46	47	41	40	40
COMPTROLLERS DIV DIR	729	M	3	40	1856.00	40	39	40	36	36	35
PUBLIC SERV EXEC V	787	M	5	40	1856.00	50	48	50	40	40	40
PUBLIC HEALTH DENTAL DIR.	2515	M	1	40	1856.00	40	39	40	37	37	37
PUBLIC HEALTH SVCE CHF I	2521	M	2	42	2044.80	50	48	49	42	41	40
PUBLIC HEALTH SVCE CHF II	2522	M	2	46	2488.00	50	48	49	42	41	40
CAPITOL GUIDE AIDE	1360	X	6	8	439.20	14	16	14	10	12	11
ELEVATOR OPERATOR	7030	X	2	8	439.20	14	15	14	9	11	10
LAUNDRY WORKER I	7305	X	33	10	470.40	16	18	17	10	11	10
CUSTODIAL WORKER	7005	X	332	11	488.00	14	16	14	9	10	10
MAIL CLERK I	260	X	24	12	508.00	15	17	16	10	12	11
LIBRARY AIDE	1306	X	8	12	500.00	16	17	16	14	17	15
LABORATORY ASST I	5165	X	8	12	496.80	15	17	15	13	14	13
SYSTEM SUPPORT WORKER I	111	X	6	13	521.60	16	17	16	14	16	15
LIQUOR STORE CLERK	220	X	220	13	528.00	16	18	17	12	14	13
BINDERY WORKER	8510	X	17	13	528.00	15	16	15	11	12	12
YOUTH SERVICES WORKER II	3046	X	77	15	570.40	18	19	18	16	18	16
PLANNING AIDE I	4005	X	6	15	570.40	14	16	15	14	15	15
DESIGN TECHNICIAN I	4355	X	3	15	570.40	15	16	15	14	16	15
TELETYPE OPERATOR	4705	X	11	15	571.20	17	18	17	16	18	17
BAKER II	7226	X	7	15	572.80	18	19	18	16	17	16
LIQUOR STORE MANAGER I	225	X	116	16	618.40	21	22	21	21	22	21
SOCIAL WORK ASSOCIATE	3010	X	3	16	597.60	19	20	19	20	21	20
CUSTODIAL ASSISTANT	7015	X	5	16	597.60	18	19	18	17	18	18
SIGN SHOP WORKER	8346	X	8	16	597.60	15	17	16	15	15	14
COMPUTER OPERATOR I	135	X	25	17	625.60	17	19	18	18	18	18
YOUTH SERV WKR. III (SUPV)	3048	X	8	17	650.40	22	23	22	22	23	22
LABORATORY ASST III	5167	X	8	17	625.60	18	19	18	18	20	18
PLANNING AIDE II	4006	X	18	18	654.40	16	18	17	18	19	19
RIGHT OF WAY AIDE II	4106	X	3	18	654.40	16	17	16	17	18	18
DESIGN TECHNICIAN II	4356	X	25	18	654.40	17	18	17	17	19	18
REP EQUIP OPER II	8526	X	12	18	650.40	17	18	17	16	17	16
REVENUE AGENT I	354	X	17	19	688.80	19	20	20	20	21	21
HEALTH INSPECTOR	2405	X	4	19	684.00	18	19	18	19	19	19
FINGERPRINT TECHNICIAN	6030	X	4	19	688.80	20	21	20	21	23	22
CUSTODIAL SUPV	7017	X	15	19	708.80	21	22	21	23	22	23
ILLUSTRATOR	8520	X	5	19	688.80	18	19	18	18	20	19
MANPOWER SPECIALIST I	804	X	14	20	711.20	19	20	19	20	21	20
CLAIMS SPECIALIST I	852	X	5	20	711.20	19	20	19	20	21	20
COMMUNICATIONS OPERATOR I	4715	X	38	20	711.20	19	20	19	18	20	19
DRIVERS LICENSE EXAMINER	6300	X	36	20	739.20	23	23	23	20	22	21
REP EQUIP LEADER	8530	X	3	20	711.20	19	20	19	20	21	20
COMPUTER OPERATOR II	136	X	16	21	737.60	19	21	20	21	22	21
LIQUOR STORE MANAGER II	226	X	59	21	768.80	21	22	21	22	23	22
VOCATIONAL INSTRUCTOR	1035	X	6	21	737.60	22	23	22	23	24	23
ACTIVITIES SPEC. I	2110	X	70	21	768.80	21	22	22	21	22	21
VOC. REHAB. SPECIALIST	2576	X	16	21	746.40	25	25	25	26	27	26
YOUTH COUNSELOR I	3055	X	19	21	746.40	22	23	22	22	23	22

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DRUG ABUSE COUNSELOR II	3252	X	12	21	737.60	21	22	21	22	23	22
BLDG SERV SUPV I	7025	X	6	21	768.80	21	22	21	22	22	22
AUDIO-VISUAL AIDE TECH	8645	X	3	21	737.60	18	19	18	19	21	20
PURCHASING AGENT I	210	X	10	22	768.80	20	21	20	21	23	22
ACCOUNTANT/AUDITOR 1	309	X	54	22	768.80	20	21	20	21	23	22
STAT RESEARCH ANAL I	743	X	8	22	768.80	19	20	19	21	23	22
MANPOWER SPECIALIST II	806	X	207	22	771.20	21	22	21	22	23	23
EMPLOYMENT COUNSELOR I	810	X	4	22	780.00	21	22	21	21	23	22
CLAIMS SPECIALIST II	853	X	77	22	771.20	21	22	21	22	23	23
LIBRARIAN I	1315	X	14	22	804.00	21	22	21	21	23	22
CIVIL RIGHTS SPEC I	3438	X	5	22	780.00	22	22	22	21	23	22
COMMUNICATIONS OPERATOR II	4717	X	13	22	771.20	20	21	21	20	22	20
ASST. DIETITIAN	7250	X	6	22	804.00	23	24	23	24	26	24
GRAPHIC ARTIST	8518	X	13	22	771.20	19	20	19	21	22	21
COMPUTER PROGRAMMER	151	X	29	23	805.60	20	21	20	23	24	23
ACCOUNTING TECHNICIAN III	294	X	9	23	808.00	22	22	22	24	25	24
REVENUE EXAMINER II	351	X	42	23	805.60	21	22	21	23	26	23
BUDGET ANALYST I	721	X	2	23	838.40	21	22	21	23	24	23
PROGRAM PLANNER I	4020	X	6	23	805.60	20	21	21	21	23	22
CONSERVATION PROGRAM COORD	5356	X	4	23	812.00	21	22	21	22	24	23
SENIOR DRIVERS LIC EXAM	6301	X	6	23	838.40	24	24	24	23	24	23
DIETITIAN I	7252	X	3	23	838.40	24	24	24	25	26	25
ENERGY MGMT. TECH.	8004	X	3	23	808.00	19	20	20	23	23	23
COMPUTER OPERATOR III	137	X	5	24	872.80	21	22	21	24	24	23
ADMINISTRATIVE ASST II	709	X	34	24	844.80	22	23	23	25	26	25
MANPOWER SPECIALIST III	808	X	52	24	844.80	21	22	21	22	23	23
EMPLOYMENT COUNSELOR II	812	X	9	24	850.40	22	23	23	24	25	24
OCCUPATIONAL THERAPIST I	2118	X	4	24	872.80	24	25	25	24	25	24
DISEASE PREV SPEC I	2425	X	7	24	849.60	24	25	24	25	26	25
SOCIAL WORKER III	3016	X	147	24	850.40	24	25	24	25	26	25
SOCIAL WKR III (SUPV)	3020	X	33	24	872.80	25	26	25	26	27	27
YOUTH COUNSELOR II	3056	X	14	24	872.80	27	27	27	28	29	28
TREATMENT PROJECT SUPV	3230	X	7	24	872.80	25	26	26	28	28	27
CRIMINAL ANALYST	6019	X	2	24	842.40	22	23	22	24	25	24
CRIMINALIST I	6020	X	5	24	872.80	22	23	23	24	25	24
STAT RESEARCH ANAL II	744	X	12	25	867.20	20	21	21	23	25	24
CLAIMS SPECIALIST III	854	X	6	25	907.20	23	23	23	24	25	24
EMPLOYER LIABILITY AUDITOR	882	X	42	25	867.20	24	24	24	26	27	26
EDUCATOR III	1017	X	33	25	907.20	25	25	25	27	27	26
LIBRARIAN II	1316	X	6	25	907.20	23	24	23	25	26	25
CIVIL RIGHTS SPEC II	3439	X	5	25	874.40	24	25	25	26	26	26
PROGRAMMER/ANALYST	152	X	81	26	912.00	24	25	24	27	28	28
ACCOUNTANT II	311	X	28	26	912.00	23	24	23	26	27	26
REVENUE EXAMINER 3	357	X	13	26	912.00	26	26	26	26	28	27
UTILITY ANALYST II	529	X	13	26	912.00	23	24	23	25	26	25
ADMINISTRATIVE OFFICER II	692	X	34	26	949.60	25	25	25	27	28	27
INVESTIGATOR II	696	X	18	26	912.00	23	24	24	25	26	25
BUDGET ANALYST II	722	X	10	26	949.60	23	24	23	27	27	27
MANAGEMENT ANALYST II	734	X	28	26	949.60	22	23	23	26	26	26
PERSONNEL MGMT SPEC II	791	X	24	26	949.60	26	26	26	28	28	28
HISTORICAL PRESERV SPEC	1337	X	7	26	912.00	26	27	27	27	28	27
SOCIAL WORKER IV	3017	X	33	26	918.40	25	26	25	27	28	27
SOCIAL WKR IV (SUPV)	3021	X	27	26	949.60	29	29	29	30	30	30
PROGRAM PLANNER II	4022	X	53	26	912.00	23	23	23	25	26	25
INDUSTRIAL HYGIENIST	673	X	12	27	992.00	26	26	26	26	26	25

COMPARISON OF ACTUAL AND PRED. PAY GRADES

JOB TITLE	JOB CODE	JOB SEX	TOTAL INCUMB	CURRENT GRADE	CURRENT MAX SAL	PRED GRADE - POINTS ALL	PRED GRADE - POINTS MALE EQ	PRED GRADE - POINTS %FEMALE	PRED GRADE - STAT WGT ALL	PRED GRADE - STAT WGT MALE EQ	PRED GRADE - STAT WGT %FEMALE
REFUGEE SPECIALIST III	897	X	2	27	992.00	23	24	24	25	26	26
PHYSICIANS ASSISTANT	2550	X	3	27	992.00	27	27	27	27	28	27
SENIOR TRANS PLAN-IN-TRAIN	4046	X	3	27	992.00	22	23	22	25	26	25
INSURANCE CO. EXAMINER II	445	X	15	28	1005.60	24	25	24	26	27	26
SOCIAL WORKER V	3018	X	15	28	1007.20	27	28	27	29	30	29
SOCIAL WKR V (SUPV)	3022	X	7	28	1040.80	29	29	29	30	30	30
COUNTY SOC SVC DIR II	3031	X	26	28	1040.80	29	29	29	29	30	29
INCOME MAINT WKR V	3094	X	12	28	1010.40	24	25	24	27	27	26
INC MAINT WKR V (SUPV)	3167	X	3	28	1040.80	25	26	25	25	26	25
AFF ACTION COMP OFF II	3314	X	6	28	1040.80	27	27	27	28	28	28
CIVIL RIGHTS SPECIALIST 3	3440	X	3	28	1040.80	27	28	27	28	29	28
PROGRAM PLANNER III	4023	X	66	28	1040.80	25	26	26	29	29	29
LEAD PROGRAMMER	153	X	17	29	1055.20	25	26	25	28	29	28
SYSTEMS ANALYST	156	X	34	29	1055.20	26	26	26	29	29	29
INSURANCE COMPLAINT ANAL	454	X	3	29	1055.20	29	29	29	29	30	29
ATTORNEY I	643	X	3	29	1091.20	27	27	27	28	28	28
EXECUTIVE ASST	693	X	18	29	1091.20	27	28	27	28	29	28
BUDGET ANALYST III	723	X	7	29	1091.20	25	26	25	29	29	29
STAT RESEARCH ANAL III	746	X	2	29	1091.20	25	26	25	28	29	28
TRAINING OFFICER II	765	X	20	29	1091.20	27	28	27	31	30	30
PERSONNEL MGMT SPEC III	792	X	23	29	1091.20	28	28	28	29	29	29
MANPOWER RESEARCH ECON III	872	X	2	29	1091.20	27	27	27	29	30	29
PHARMACIST	2226	X	8	29	1091.20	26	26	26	26	27	27
PSYCHOLOGIST II	3246	X	34	29	1091.20	29	29	29	29	29	28
ASSOC SUPT-CONSERVATION	5225	X	3	29	1091.20	30	30	30	30	30	30
COMPUTER OPER MGR II	148	X	2	30	1143.20	26	27	26	28	29	28
MANAGEMENT ANALYST III	736	X	11	30	1143.20	27	27	27	29	30	29
SOCIAL WKR VI (SUPV)	3023	X	9	30	1143.20	30	30	30	31	32	31
COUNTY SOC SVC DIR III	3032	X	29	30	1143.20	31	31	31	30	31	30
INC MAINT WKR VI (SUPV)	3168	X	11	30	1143.20	27	27	27	27	28	27
REGIONAL COLLECTIONS ADMINISTRATOR	3347	X	5	30	1143.20	29	29	29	31	31	31
PROGRAM & PLANNING ADM I	4024	X	18	30	1143.20	27	27	27	29	29	29
CHEMIST III	4417	X	3	30	1143.20	28	28	28	31	30	30
MICROBIOLOGIST III	4424	X	3	30	1143.20	28	28	28	30	30	29
SENIOR SYSTEMS PROGRAMMER	167	X	4	31	1198.40	29	29	29	30	31	30
HEARINGS COMPL OFFCR II	641	X	33	31	1163.20	32	32	32	33	33	32
SENIOR SYSTEMS ANAL (SUPV)	159	X	26	32	1256.80	30	30	30	31	32	31
INSURANCE COMPLAINTS SUPV	456	X	2	32	1256.80	35	34	34	34	34	33
PERSONNEL MGMT SPEC IV	793	X	17	32	1256.80	32	31	32	32	33	32
PROGRAM & PLANNING ADM II	4025	X	3	32	1256.80	27	27	27	29	29	29
ACTUARY	465	X	2	33	1317.60	33	33	33	33	34	33
ATTORNEY II	644	X	10	33	1317.60	34	33	34	33	33	33
UTILITY ADMINISTRATOR II	538	X	3	40	1856.00	42	40	41	37	37	36

Under the current classification system, there is a 6.6 pay grade difference on average between male-dominated and female-dominated jobs. Under each of the models described above in order, this 6.6 average grade difference decreases to 4.6 grades, 4.1 grades, 4.5 grades, 5 grades, 4.3 grades and 4.4 grades, respectively. Thus, these results suggest that 1.5 to 2.5 of the grades observed in this 6.6 grade difference are the result of the factors other than job worth; rather when job worth is considered, the average pay grade difference between male-dominated and female-dominated jobs decreases to a range from 4.1 to 5 pay grades depending upon the particular prediction model examined. This information is summarized in Exhibit 14.

An analysis also was done on each of the models described above to determine how many pay grades on average female-dominated jobs would increase over their current pay grade. The results suggest that for the committee assigned weights across the three prediction models examined, female-dominated jobs would increase in pay grade from 1.4 grades on average to 2.4 grades on average. When statistically derived weights are applied, female-dominated jobs would increase in pay grade, depending on which model is examined, from 1.1 pay grades on average to 2.3 pay grades on average. Similarly, for the committee assigned weights, male-dominated jobs would go down in pay grade on average from .1 pay grade to .6 pay grades. When the statistically derived weights are applied, the average change in pay grade from male-dominated jobs ranges from a 0 change on average to a .7 pay grade decrease in pay grade, depending on the particular model examined.

The impact analysis just described considers grade movement for female-dominated and male-dominated jobs <u>on average</u>. The use of averages, however, can be misleading. For example, if one half of the male-dominated jobs went up 10 pay grades and the other half of the jobs went down 10 pay grades, on average, there would be a 0 pay grade difference. Therefore, to further explore the impact of the models on the predicted pay grade, an analysis was conducted to determine the percentage of male-dominated jobs and the percentage of female-dominated jobs that went up one or more pay grades for each model and that went down one or more pay grades under each model. This information is summarized in Exhibit 15.

For the three models that utilize committee assigned factor weights from 66% to 73% of the female-dominated jobs showed an increase of one pay grade or more. In contrast, from 32% to 40% of the male-dominated jobs showed a one grade increase or greater. Under the committee assigned weight models, from 17% to 25% of the female-dominated jobs went down one pay grade or more, and from 43% to 51% of the male-dominated jobs went down one pay grade or more. The greatest percentage of jobs increasing one pay grade or more occurred for the model that derived from the equation for male-dominated jobs only.

STATE OF IOWA

Comparable Worth Study

Difference in Mean Grade by
Sex Composition for Various Models

Model	Mean Predicted Pay Grade		
	Male-Dominated	Female-Dominated	Difference
TOTALL	25.2	20.6	4.6
TOTMALE	25.7	21.6	4.1
TOTPFEM	25.3	20.8	4.5
STATALL	25.3	20.3	5.0
STATMALE	25.8	21.5	4.3
STATPFEM	25.1	20.7	4.4
Current System	25.8	19.2	6.6

Footnote: These models are defined on page 42.

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Comparable Worth Study

Gross Impact of Grade Changes

↑ = up one grade or more
0 = same grade
↓ = down one grade or more

		Female %	Male %
TOTALL			
	↑	66.10	31.73
	0	8.89	17.35
	↓	24.98	50.91
TOTMALE			
	↑	72.79	39.96
	0	10.56	16.67
	↓	16.68	43.38
TOTPFEM			
	↑	68.90	34.69
	0	7.78	15.98
	↓	23.34	49.32
STATALL			
	↑	63.89	28.31
	0	15.00	22.83
	↓	21.11	48.87
STATMALE			
	↑	81.11	37.89
	0	10.00	23.97
	↓	8.90	38.14
STATPFEM			
	↑	71.66	23.07
	0	12.22	21.69
	↓	16.12	55.24

Footnote: These models are defined on page 42.

IV. IMPLEMENTATION IMPACT

Under the three models using the purely statistically derived factor weights, from 64% to 81% of the female-dominated jobs increased one pay grade or more and from 23% to 38% of the male-dominated jobs increased one pay grade or more. In contrast, for the three statistically derived models, from 9% to 21% of the female-dominated jobs decreased one pay grade or more and from 38% to 55% of the male-dominated decreased one pay grade or more. Again, the greatest percentage of female-dominated and male-dominated jobs increased under the statistically derived model that was developed on male-dominated jobs only. Appendix L sets forth the total results of these analyses.

These results suggest that for both statistically derived weights and committee assigned weights the greatest cost impact occurs for prediction models that are derived from male-dominated jobs only. Models based on the inclusion of "percent female" are second most costly, and equations based on all jobs (without inclusion of percent female) are least costly. However, this latter approach does not necessarily produce a bias free estimate of the relationship between job evaluation points and pay grade. Further, there are statistical reasons to believe that the models based on "male-dominated jobs only" may incorrectly exaggerate the amount by which female-dominated jobs should be increased. Specifically, when there is any unreliability in the job evaluation factors (as there is likely to be with any judgment based system) and when one subgroup (e.g., male-dominated jobs) scores on an average higher than another (e.g., female-dominated jobs) on these evaluation factors, a statistical bias will occur which can suggest pay discrimination when none exist or can overestimate the amount of the discrimination.* Roberts (1980) has pointed out the concept underlying this bias is "...elementary but easy. It relates to what is usually called the regression fallacy, a subject that has ensnared many a scientific investigator and that I have always found hard to explain to students." For a numerical example of this bias, refer to Roberts (1980). For these reasons, it is recommended that models based on the inclusion of "percent female" be given most consideration.

Should the State decide not to use the pay grades set forth in Exhibit 4, and instead want to rely upon one of the three prediction models, information regarding the actual point ranges for each pay grade for each respective prediction model is set forth in Exhibit 16. Exhibit 17, 18 and 19 set forth the three alternative methods of predicting bi-weekly maximum salaries described earlier in Task 9.2 of Section II of this report for the all jobs line, the male equation, and the percent female constant approach, respectively.

* See Roberts, H.V., Statistical Biases in the Measurement of Employment Discrimination, INLIVERNASH, E.R. (Ed) Comparable Worth: Issue and Alternatives, Washington D.C.: E.E.O.C, 1980.

Exhibit 16

STATE OF IOWA

Comparable Worth Study

Job Evaluation Point Ranges

Associated with Pay Grades Predicted

Under Three Models

Predicted "Pay Grade"	Evaluation Point Range		
	TOTALL	TOTMALE	TOTPFEM
13	124-141	---	115-132
14	142-159	---	133-151
15	160-176	127-146	152-169
16	177-194	147-166	170-188
17	195-212	167-186	189-207
18	213-230	187-206	208-225
19	231-247	2-7-226	226-244
20	248-265	227-246	245-262
21	266-283	247-265	263-281
22	284-301	266-285	282-300
23	302-318	286-305	301-318
24	319-336	306-325	319-337
25	337-354	326-345	338-355
26	355-371	346-365	356-374
27	372-389	366-384	375-393
28	390-407	385-404	394-411
29	408-425	405-424	412-430
30	426-442	425-444	431-448
31	443-460	445-464	449-467
32	461-478	465-484	468-485
33	479-496	485-503	486-504
34	497-513	504-523	505-523
35	514-531	524-543	524-541
36	532-549	544-563	542-560
37	550-567	564-583	561-578
38	568-584	584-603	579-597
39	585-602	604-623	598-616
40	603-620	624-642	617-634
41	621-637	643-662	635-653
42	638-655	663-682	654-671
43	656-673	683-702	672-690
44	674-691	703-722	691-708
45	692-708	723-742	709-727
46	709-726	743-761	728-746
47	727-744	762-781	747-765
48	745-762	782-801	765-783
49	763-779	802-821	784-801
50	780-797	822-841	802-820
51	798-815	842-861	821-839

Exhibit 17

STATE OF IOWA

COMPARABLE WORTH STUDY

Summary of Predicted Salary Grade Maximums
for the Statistically Derived "All Jobs"
Pay Grade Structure Using Alternative Formulas

Predicted Pay Grade	Break Points Using Range	Midpoint	Predicted Maximum Salaries: Percent Female	All Jobs	Male Equation
13	124-141	132.5	332.47	419.57	436.44
14	142-159	150.5	376.14	464.37	480.84
15	160-176	168	418.60	507.93	524.01
16	177-194	185.5	461.05	551.49	567.19
17	195-212	203.5	504.72	596.29	611.59
18	213-230	221.5	548.39	641.09	656.00
19	231-247	239	590.84	684.65	699.17
20	248-265	256.5	633.30	728.21	742.35
21	266-283	274.5	676.97	773.01	786.75
22	284-301	292.5	720.63	817.81	831.16
23	302-318	310	763.09	861.37	874.33
24	319-336	327.5	805.54	904.93	917.50
25	337-354	345.5	849.21	949.73	961.91
26	355-371	363	891.67	993.29	1,005.08
27	372-389	380.5	934.12	1,036.85	1,048.25
28	390-407	398.5	977.80	1,081.65	1,092.66
29	408-425	416.5	1,021.46	1,126.45	1,137.07
30	426-442	434	1,063.91	1,170.01	1,180.24
31	443-460	451.5	1,106.37	1,213.56	1,223.41
32	461-478	469.5	1,150.04	1,258.37	1,267.82
33	479-496	487.5	1,193.70	1,303.17	1,312.22
34	497-513	505	1,236.16	1,346.73	1,355.40
35	514-531	522.5	1,278.61	1,390.28	1,398.56
36	532-549	540.5	1,322.28	1,435.09	1,442.97
37	550-567	558.5	1,365.95	1,479.89	1,487.38
38	568-584	576	1,408.41	1,523.44	1,530.55
39	585-602	593.5	1,450.86	1,567.00	1,573.73
40	603-620	611.5	1,494.53	1,611.80	1,618.13
41	621-637	629	1,536.98	1,655.36	1,661.30
42	638-655	646.5	1,579.44	1,698.92	1,704.47
43	656-673	664.5	1,623.11	1,743.72	1,748.88
44	674-691	682.5	1,666.77	1,788.52	1,793.29
45	692-708	700	1,709.23	1,832.08	1,836.43
46	709-726	717.5	1,751.68	1,875.64	1,879.63
47	727-744	735.5	1,795.35	1,920.44	1,924.04
48	745-762	753.5	1,839.02	1,965.24	1,968.45
49	763-779	771	1,881.48	2,008.80	2,011.62
50	780-797	788.5	1,923.93	2,052.36	2,054.79
51	798-815	806.5	1,967.60	2,097.16	2,099.20
Formula:			127.75 + 2.426 (pts.) + (-.529)(33.5)	89.78 + 2.489 (pts.)	109.56 + 2.467 (pts.)

STATE OF IOWA

COMPARABLE WORTH STUDY

Summary of Predicted Salary Grade Maximums
for the Statistically Derived "Male Equation"
Pay Grade Structure Using Alternative Formulas

Predicted Pay Grade	Break Points Using Range	Midpoint	Predicted Maximum Salaries: Percent Female	All Jobs	Male Equation
13					
14					
15	127-146	136.5	441.18	429.53	446.31
16	147-166	156.5	489.70	479.31	495.65
17	167-186	176.5	538.22	529.09	544.99
18	187-206	196.5	586.74	578.87	594.33
19	207-226	216.5	635.26	628.65	643.67
20	227-246	236.5	683.78	678.43	693.01
21	247-265	256	731.09	726.96	741.11
22	266-285	275.5	778.39	775.50	789.22
23	286-305	295.5	826.91	825.28	838.56
24	306-325	315.5	875.43	875.06	887.90
25	326-345	335.5	923.95	924.84	937.24
26	346-365	355.5	972.47	974.62	986.58
27	366-384	375	1,019.78	1,023.16	1,034.69
28	385-404	394.5	1,067.09	1,071.69	1,082.79
29	405-424	414.5	1,115.61	1,121.47	1,132.13
30	425-444	434.5	1,164.13	1,171.25	1,181.47
31	445-464	454.5	1,212.65	1,221.03	1,230.81
32	465-484	474.5	1.261.17	1,270.81	1,280.15
33	485-503	494	1,308.47	1,319.35	1,328.26
34	504-523	513.5	1,355.78	1,367.88	1,376.30
35	524-543	533.5	1,404.30	1,417.66	1,425.70
36	544-563	553.5	1,452.82	1,467.44	1,474.98
37	564-583	573.5	1,501.34	1,517.22	1,524.32
38	584-603	593.5	1,549.86	1,567.00	1,573.72
39	604-623	613.5	1,598.38	1,616.78	1,623.06
40	624-642	633	1,645.69	1,665.32	1,671.17
41	643-662	652.5	1,692.99	1,713.85	1,719.28
42	663-682	672.5	1,741.51	1,763.63	1,786.62
43	683-702	692.5	1,790.03	1,813.41	1,817.96
44	703-722	712.5	1,838.55	1,863.19	1,867.30
45	723-742	732.5	1,887.07	1,912.97	1,916.64
46	743-761	752	1,934.38	1,961.51	1,964.74
47	762-781	771.5	1,981.69	2,010.04	2,012.85
48	782-801	791.5	2,030.21	2,059.82	2,062.19
49	802-821	811.5	2,078.73	2,109.60	2,111.53
50	822-841	831.5	2,127.25	2,159.38	2,160.87
51	842-861	851.5	2,175.77	2,209.16	2,210.21
Formula:			127.75 + 2.426 (pts.) + (-.529)(33.5)	89.78 + 2.489 (pts.)	109.56 + 2.467 (pts.)

STATE OF IOWA

COMPARABLE WORTH STUDY

Summary of Predicted Salary Grade Maximums
for the Statistically Derived "Per Female" Equation
Pay Grade Structure Using Alternative Formulas

Predicted Pay Grade	Break Points Using Range	Midpoint	Predicted Maximum Salaries: Percent Female	All Jobs	Male Equation
13	115-132	123.5	409.64	397.17	414.23
14	133-151	142	454.52	443.22	459.87
15	152-169	160.5	499.40	489.26	505.51
16	170-188	179	544.28	535.31	551.15
17	189-207	198	590.38	582.60	598.03
18	208-225	216.5	635.26	628.65	643.67
19	226-244	235	680.14	674.70	689.31
20	245-262	253.5	725.02	720.74	734.94
21	263-281	272	769.90	766.79	780.58
22	282-300	291	815.99	814.08	827.46
23	301-318	309.5	860.88	860.13	873.10
24	319-337	328	905.76	906.17	918.74
25	338-355	346.5	950.64	952.22	964.38
26	356-374	365	995.52	998.27	1,010.02
27	375-393	384	1,041.61	1,045.56	1,056.89
28	394-411	402.5	1,086.49	1,091.60	1,102.53
29	412-430	421	1,131.37	1,137.65	1,148.17
30	431-448	439.5	1,175.04	1,183.70	1,193.81
31	449-467	458	1,221.14	1,229.74	1,239.45
32	468-485	476.5	1,266.02	1,275.79	1,285.09
33	486-504	496	1,313.32	1,324.32	1,333.19
34	505-523	514	1,356.99	1,369.13	1,377.60
35	524-541	532.5	1,401.87	1,415.17	1,423.24
36	542-560	551	1,446.75	1,461.22	1,468.88
37	561-578	569.5	1,491.64	1,507.27	1,514.52
38	579-597	588	1,536.52	1,553.31	1,560.16
39	598-616	607	1,582.61	1,600.60	1,607.03
40	617-634	625.5	1,627.49	1,646.65	1,652.67
41	635-653	644	1,672.37	1,692.70	1,698.31
42	654-671	662.5	1,717.25	1,738.74	1,743.95
43	672-690	681	1,762.13	1,784.79	1,789.59
44	691-708	699.5	1,807.02	1,830.84	1,835.23
45	709-727	718	1,851.90	1,876.88	1,880.87
46	728-746	737	1,897.99	1,924.17	1,927.74
47	747-764	755.5	1,942.87	1,970.22	1,973.38
48	765-783	774	1,937.75	2,016.27	2,019.02
49	784-801	792.5	2,032.63	2,062.32	2,064.66
50	802-820	811	2,077.52	2,108.36	2,110.30
51	-				
Formula:			127.75 + 2.426 (pts.) + (-.529)(33.5)	89.78 + 2.489 (pts.)	109.56 + 2.467 (pts.)

V. EVALUATION SYSTEM ADMINISTRATION

V. EVALUATION SYSTEM ADMINISTRATION

The ongoing maintenance of the recommended evaluation system requires several procedures. In this section of our report, we recommend procedures to govern the administration of the evaluation system. The recommended procedures are similar in many respects to those currently in effect, as outlined in the "Rules of the Iowa Merit System." We have reviewed this document with particular emphasis given to identifying any areas that may need revision to fully meet the objectives of comparable worth. Specific sections of the "Rules of the Iowa Merit System," hereinafter referred to as the "Rules," are cited for reference purposes.

Where appropriate, we present our recommendations in a format that addresses and prescribes a recommended procedure. It should be noted that specific procedures are merely suggested and can be modified as required to enhance clarity and implementation.

Procedures

1. Evaluation System Policy or Philosophy

   The objectives of the evaluation system shall be:

   a. To provide an overall job evaluation plan for all State of Iowa Merit System employees which is internally equitable and which provides comparable pay for positions of comparable worth.

   b. To ensure that pay grades shall be determined with regard to such factors as skill, effort, responsibility, and working conditions.

   c. To provide personnel who are trained to use and understand the recommended position analysis and evaluation methods and procedures.

   d. To provide for continued application of the system over a number of years and to ensure an impartial means for assigning new positions to the pay plan as they are established or as existing positions are modified.

   e. To provide for clear communication of the evaluation system to affected employees.

   We recommend that Section 570-3.1(19A) of the "Rules" incorporate a reference to the objectives of comparable worth as indicated above.

2. Responsibility for Administration

We recommend that the Iowa Merit Employment Department be responsible for administering job evaluation matters. It is important that the recommendations concerning job evaluations be prepared by individuals with direct knowledge about (1) the content of job classifications under evaluation, and (2) the impact the decisions may have on the internal equity of the established job classification system. The personnel function in each agency should have responsibility for analyzing and evaluating these job classifications using the evaluation plan in cooperation with the Iowa Merit Employment Department. The current procedures for allocating and reallocating positions, as identified in section 570 3.2(19A) and 570 3.3(19A) are consistent with our recommendations.

We recommend that the Iowa Merit Employment Department establish an ongoing system to maintain the factors and degrees corresponding with job evaluation ratings. Maintaining the job evaluation ratings data base will be valuable for future evaluations. The types of reports generated for this study are recommended.

3. Labor Market Issues

There may be periods of time when a scarcity of labor supply in certain job classifications makes it difficult to attract and retain qualified personnel at existing salary grade levels. Such external salary comparison problems should be resolved without altering the salary grade assignments, unless there is a justified change in job responsibilities. We recommend, instead, establishing a temporary market adjustment rate for the affected job classification grade that would remain in place only as long as the scarcity existed. Any market adjustments would require documentation and approval to be established and to remain in force. Specifically, we recommend reviewing the need for the adjustment, at minimum, on an annual basis.

Section 570-4.5(19A) f(4) of the "Rules" provides for starting rates of pay below the minimum of the salary range for certain types of work in certain geographic areas. We recommend that the Merit Employment Department review this policy from both a comparable worth perspective and in light of EEOC guidelines issued in 1981. In general, the EEOC guidelines, as specified in 29CFR Part 1620.3(a) have taken a very restrictive view on when and how such geographic policies may be used.

4. Adding New Jobs to the Classification Structure

In order to carry out the goals and objectives of the State Merit Employment System and its various departments, new job classifications are sometimes created or the organization structure is modified and duties and responsibilities are redistributed. The evaluation of new job classifications for placement in the appropriate pay grade is the responsibility of the Iowa Merit Employment Department. The evaluation system is utilized to determine grade placement of a new job classification or an existing job classification which has undergone significant change.

The Iowa Merit Employment Department should recommend pay grade placement based on applying the job evaluation system. It should be remembered in the case of reorganization or redistribution of duties and responsibilities, that duties added to one position are most often accompanied by a reduction in responsibilities to another position. Reclassifications should be made both upward and downward in these instances.

5. Reclassification Procedures for Individual Positions

If the duties and responsibilities of an established position are permanently and significantly changed, or if the immediate supervisor believes a position is misclassified, the following actions should be taken:

- The employee or the responsible immediate supervisor should request a position re-evaluation, documenting completely the reasons for a position re-evaluation.

- The Iowa Merit Employment Department should review and evaluate the position. The responsible immediate supervisor shall be notified of the results. The position incumbent or representative position incumbent and the incumbent's immediate supervisor may be asked to explain or document the position's job duties and responsibilities, if necessary.

6. Job Re-Evaluation and Reclassification

Should an existing classification be re-assigned to a higher grade, the employees in that classification should be immediately placed in the new grade at the employee's current salary or at the minimum of the range, whichever is greater.

When a classification is re-assigned to a lower grade because a re-evaluation indicates reduced duties (e.g., staff reduction due to program cutback), no salary reductions should immediately occur. If an employee's salary is above the maximum of the new grade, the following guideline should apply:

- Grant no salary increments or general structure increases until the maximum for the new grade equals or exceeds the employee's salary.

The above recommendation is consistent with current policy with respect to "red-circle" rates as stated in 570-4.5(7)d. The current policy also provides for a maximum of two years at the "red-circled" rate. EEOC guidelines place a strong emphasis on the word "temporary" when applied to "red-circle" rates. While no specific definition of temporary has been provided, the Iowa Merit Employment Department should thoroughly review any requests to deviate from their two year policy.

7. Periodic Review

Each year, the Iowa Merit Employment Department should select approximately 20% of the Merit System job classifications for review. The selected job classifications should be examined to determine if any changes in duties have occurred that justify reclassification. This periodic review process permits an examination of each job classification at least one time in every five years.

VI. RECOMMENDED PAY GRADE ASSIGNMENT APPEAL PROCEDURE

VI. RECOMMENDED PAY GRADE ASSIGNMENT APPEAL PROCEDURE

We recommend that employees be notified of the impact of this study on their classification as soon as possible and that they be given an opportunity to question the appropriateness of their rating if they believe an error has been made.

The appeal procedure should include the following steps:

1. Establish an Appeals Committee.

   We recommend the Appeals Committee be composed of departmental Personnel representatives from five to seven different departments, since they are the ones who will be responsible for ongoing administration, and they are already experienced in basic compensation administration. Committee members should first receive thorough training in the use of the new evaluation system. When appeals involve a job classification found primarily (or exclusively) in a particular Committee member's department, that member would not be involved in the appeal decision.

2. Notify Department Management of Study Results and Provide Documentation to Departmental Personnel Representatives.

   The departmental Personnel representatives will need to be supplied with a copy of the classification plan showing the new pay grade assignment, copies of the appeals forms, and a description of the appeals process.

3. Notify Employees of Study Results.

   Exhibit 20 provides a sample draft letter to employees on the study results.

4. Employees Submit Appeals.

   A stated deadline date for submitting appeals will be on the letter to employees. We suggest a date two weeks from notification. Appeals will be transmitted through the departmental Personnel representatives to the Appeals Committee.

   Exhibit 21 provides a sample draft appeals form to be used in the appeals process.

5. Department Head Review.

   All appeals must include a review by department heads, including a recommendation on the merits of the appeal, before they are submitted to the Appeals Committee. Employees should be able to see supervisory recommendations and comments.

6. Committee Review of Appeals.

Only appeals that relate to the pay grade assignment will be considered. Appeals that concern an individual's belief that he/she should be placed in a different job classification will be referred to the Merit Employment Department.

The Appeals Committee will review the appeals in accordance with the job evaluation system to arrive at a final evaluation. If the new points result in a lower or higher pay grade assignment, a change will be made accordingly. There may be circumstances where the Appeals Committee changes one degree in a factor, but it doesn't result in a change in pay grade assignment. Such changes should be made to the evaluation results to maintain the integrity of the system. The Appeals Committee may request a personal meeting with an employee or a group of employees to gather further data or clarification of duties.

7. Notify Employees and Departments of Results.

After the Appeals Committee's work is completed, the individual employees affected and the departments should be notified of results. We suggest that the Merit Employment Department perform this function, as well as providing staff support to the Appeals Committee and ensuring that they have all necessary information for conducting their reviews.

DRAFT LETTER TO EMPLOYEES

STATE OF IOWA

To: All Employees

From:

Subject: Results of Comparable Worth Study

The State of Iowa has adopted a new job evaluation system and new pay grade assignments for all Merit Employment System employees, based upon the recommendations of Arthur Young & Company in their study of Comparable Worth.

All of the Merit Employment System job classifications were evaluated in accordance with House File 313 based upon their relative skill, effort, responsibility and working conditions, which were further defined using the following thirteen factors:

1. Knowledge- From Formal Training/Education
2. Knowledge- From Experience
3. Job Complexity, Judgment, and Problem-Solving
4. Guidelines/Supervision Available
5. Personal Contacts
6. Physical Demands
7. Mental/Visual Demands
8. Supervision Exercised
9. Scope and Effect
10. Impact of Errors
11. Working Environment
12. Unavoidable Hazards or Risks
13. Work Pace/Pressures and Interruptions

More detailed descriptions of each of these factors is available from your department's Personnel representative.

We emphasize that the evaluations are based upon the content of the job classifications as a whole, and not on individual positions or individual job performance. As a result of this process, all classifications were placed into one salary grade structure. Note that the new grade structure and corresponding pay grade numbers do not necessarily match that used under the previous system. Your department's Personnel representative has a copy of the new pay grades and classifications assignments to those grades.

The results of the study on your classification are as follows:

> Your job classification has been assigned to pay grade _____, which will have a pay range of $_____ to $_____, bi-weekly.

The new system provides that any employee may appeal the pay grade to which her/his job classification has been assigned. To exercise this option, you must submit a written statement of the reasons for the appeal to _____ no later than _____, 1984. This "Pay Grade Assignment Appeal Form" can be obtained from your department's Personnel office for this purpose. The appeal form provides for review and comment by your department head.

The work of the Appeals Committee will be to review the placement of your classification into an appropriate pay grade and not the appropriateness of your allocation to a given job classification. The assignment of your classification to the proper pay grade will be determined by the nature of the work performed by you and others with the same job classification title.

PAY GRADE ASSIGNMENT APPEAL FORM

Name: _____ Date: _____

Employee Number: _____

Current Job Classification Title: _____

Did you previously complete an Arthur Young Position Analysis Questionnaire as part of the Comparable Worth study? ____ Yes ____ No

Directions: In the spaces below, describe the basis of your appeal. Indicate the ways in which you believe your job is different from, or similar to, comparable job classifications. The committee reviewing the appeals will have copies of completed questionnaires, job specifications and interview notes representative of your overall job classification.

Submit the appeal to your department's Personnel representative by _____, 1984. Your department head will review and comment on appeals submitted.

Please complete the information as requested below. Attach additional pages if necessary.

APPEAL JUSTIFICATION

Factor 1: Knowledge--from Formal Training/Education.

Factor 1 measures the academic preparation and/or technical training at the entry level considered to be "normal" or "typically required" to perform the work. Factor 1 represents the knowledge requirements for the job, not the particular educational background of the person holding the job.

Comments: _____

_____

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_____

_____

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_____

Factor 2: Knowledge--from Experience

Factor 2 evaluates the least amount of time normally required for a person with the "typically required" training/education to acquire the knowledge and skills to perform the job competently.

Comments: _____

Factor 3: Job Complexity, Judgment and Problem Solving

Factor 3 measures the complexity of duties, and the frequency and extent of judgment used in decision making and problem solving.

Comments: _____

Factor 4: Guidelines/Supervision Available

Factor 4 covers the nature of guidelines and the judgment needed for application. Include the extent and closeness of supervision required and received for methods to be followed, results to be obtained, and frequency of work progress review.

Comments: _____

Factor 5: Personal Contacts

Factor 5 measures the responsibility for effective handling of personal contacts with persons NOT in your supervisory chain. Discuss the frequency, purpose, importance, setting and with whom you have contact.

Comments: _____

_____

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_____

_____

_____

Factor 6: Physical Demands

Factor 6 measures physical effort and fatigue. Indicate effort, strength, stamina, and endurance necessary to perform your job.

Comments: _____

_____

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Factor 7: Mental/Visual Demands

Factor 7 measures the coordination and dexterity of mind, eye and hand. Factor 7 includes duration and intensity of the coordination or concentration and not intelligence or mental development.

Comments: _____

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Factor 8: Supervision Exercised

Factor 8 measures the nature and magnitude for supervising subordinates. Indicate the number of people supervised, and the type of supervisory responsibility. Indicate where the subordinates are located, i.e., same building, region, state wide, or beyond.

Comments: _____

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Factor 9: Scope and Effect

Factor 9 measures the relationship between the nature of the work, its purpose, breadth and depth, and the effect of work products or services within and outside the organizational unit.

Comments: _____

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Factor 10: Impact of Errors

Factor 10 measures the likely effect or probable consequences of potential errors made by an individual in the regular course of the work and the opportunity for making such errors.

Comments: _____

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Factor 11: Working Environment

Factor 11 evaluates the conditions under which the job must be performed and the extent to which conditions, i.e., heat, cold, rain, snow, dirty or bloody conditions, fumes, noises, unpleasant person-to-person encounters, etc., make the job unpleasant.

Comments: _____

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Factor 12: Unavoidable Hazards/Risks

Factor 12 measures the hazards connected with the performance of the job or the extent and seriousness of potential bodily injury that <u>normally</u> exists in performing the job.

Comments: _____

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Factor 13: Work Pace/Pressures and Interruptions

Factor 13 measures the degree to which you are able to maintain continuity of work and to plan the scheduling and priority of job tasks in advance. Indicate the changes in work volume and frequency of interruption.

Comments: _____

_____

_____

_____

_____

_____

Department Review

Please review the statements made to support this appeal. Comment below on any factors that require clarification, modification, or otherwise need to be put in perspective.

Factor No.:	Comments:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Please check the appropriate statement.

___ I do not believe this appeal merits further consideration.

___ I agree with the statements on the appeal as written and recommend the appeal for consideration.

___ The above modifications have been discussed with the incumbent, and the incumbent agrees with these modifications. I recommend the appeal, as amended, for consideration.

___ The above modifications have been discussed with the incumbent, and the incumbent disagrees with these modifications. I recommend the appeal, as amended, for consideration.

Department Head's Signature_____ Date_____

I have noted the modifications in the Comments Section above.

Employee's Signature_____ Date_____

When the review is completed, please return to the Personnel representative by _____, 1984.